

# MEDICAL REPORTS

FOR THE

HALF YEAR ENDED 31<sup>ST</sup> MARCH, 1875;

FORWARDED BY THE SURGEONS TO THE CUSTOMS AT THE  
TREATY PORTS IN CHINA;

BEING No. 9 OF THE SERIES,

AND

FORMING THE SIXTH PART OF THE

## CUSTOMS GAZETTE

No. XXV.—JANUARY-MARCH, 1875.

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PUBLISHED BY ORDER OF

*The Inspector General of Customs.*

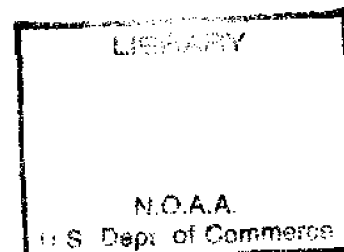
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SHANGHAI:

IMPERIAL MARITIME CUSTOMS STATISTICAL DEPARTMENT.

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(1875)



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# **National Oceanic and Atmospheric Administration**

## **Environmental Data Rescue Program**

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INSPECTOR GENERAL'S Circular No. 19 of 1870.

INSPECTORATE GENERAL OF CUSTOMS,

PEKING, 31st December, 1870.

SIR,

1.—It has been suggested to me that it would be well to take advantage of the circumstances in which the Customs Establishment is placed, to procure information with regard to disease amongst foreigners and natives in China; and I have, in consequence, come to the resolution of publishing half-yearly in collected form all that may be obtainable. If carried out to the extent hoped for, the scheme may prove highly useful to the medical profession both in China and at home, and to the public generally. I therefore look with confidence to the co-operation of the Customs Medical Officer at your port, and rely on his assisting me in this matter by framing a half-yearly report containing the result of his observations at.....upon the local peculiarities of disease, and upon diseases rarely or never encountered out of China. The facts brought forward and the opinions expressed will be arranged and published either with or without the name of the physician responsible for them, just as he may desire.

2.—The suggestions of the Customs Medical Officers at the various ports as to the points which it would be well to have especially elucidated, will be of great value in the framing of a form which will save trouble to those members of the Medical profession, whether connected with the Customs or not, who will join in carrying out the plan proposed. Meanwhile I would particularly invite attention to—

a.—The general health of.....during the period reported on; the death rate amongst foreigners; and, as far as possible, a classification of the causes of death.

b.—Diseases prevalent at.....

c.—General type of disease; peculiarities and complications encountered; special treatment demanded.

d.—Relation of disease to { Season.  
Alteration in local conditions—such as drainage, &c.  
Alteration in climatic conditions.

e.—Peculiar diseases; especially leprosy.

f.—Epidemics { Absence or presence.  
Causes.  
Course and treatment.  
Fatality.

Other points, of a general or special kind, will naturally suggest themselves to medical men; what I have above called attention to, will serve to fix the general scope of the undertaking. I have committed to Dr. ALEX. JAMIESON, of Shanghai, the charge of arranging the reports for publication, so that they may be made available in a convenient form.

3.—Considering the number of places at which the Customs Inspectorate has established offices, the thousands of miles north and south and east and west over which these offices are scattered, the varieties of climate, and the peculiar conditions to which, under such different circumstances, life and health are subjected, I believe the Inspectorate, aided by its Medical Officers, can do good service in the general interest in the direction indicated; and, as already stated, I rely with confidence on the support and assistance of the Medical Officer at each port in the furtherance and perfecting of this scheme. You will hand a copy of this Circular to Dr. ...., and request him, in my name, to hand to you in future, for transmission to myself, half-yearly reports of the kind required, for the half-years ending 31st March and 30th September—that is, for the Winter and Summer seasons.

4.—

\* \* \* \* \*

I am, &amp;c.,

(signed)

ROBERT HART,

I. G.

THE COMMISSIONERS OF CUSTOMS,—*Newchwang, Ningpo,*  
*Tientsin, Foochow,*  
*Chefoo, Tamsui,*  
*Hankow, Takow,*  
*Kiukiang, Amoy,*  
*Chinkiang, Swatow, and*  
*Shanghai, Canton.*

SHANGHAI, 1st July, 1875.

SIR,

IN accordance with the directions of your despatch No. 6 A (Returns Series) of the 24th June 1871, I now forward to the Statistical Department of the Inspectorate General of Customs the following documents:—

- A.—Report on the Health of Kiukiang, for ten months ended 31st March 1875, pp. 1-5;
- B.—Report on the Health of Shanghai, for the half year ended 31st March 1875, pp. 6-20;
- C.—Report on the Health of Peking, for the half year ended 30th September 1874, pp. 21-33;
- D.—Report on the Health of Peking, for the half year ended 31st March 1875, pp. 34-44;
- E.—Report on the Health of Foochow (Pagoda Anchorage), for the same period, pp. 45-50.

I have the honour to be,

SIR,

Your obedient Servant,

R. ALEX. JAMIESON.

THE INSPECTOR GENERAL OF CUSTOMS,

*Peking.*

The Contributors to this Volume are—

J. JARDINE, M.D., CH. M., ..... Kiukiang.

R. ALEX. JAMIESON, M.A., M.D., M.B.C.S., ..... Shanghai.

J. DUDGEON, M.D., CH. M., ..... Peking.

J. R. SOMERVILLE, M.D., F.R.C.S.E., ..... Pagoda Anchorage, Foochow.

**A.—Dr. J. JARDINE's Report on the health of Kiukiang for ten months  
ended 31st March 1875.**

DURING the last ten months in this community numbering nearly sixty individuals, there has been but little sickness, and the cases as a rule have presented symptoms of no great gravity. No deaths occurred amongst foreigners, but one patient (a missionary from Naples, aged 24), with serious phthisical symptoms, was advised to return to his native country. He had been suffering for four months before he applied for medical assistance, and when first examined his left lung presented unmistakable signs of commencing disorganisation, while his right gave indications of its tissue becoming invaded by the disease.

Two cases of acute dysentery of ordinary severity yielded to the ipecacuanha treatment.

During last autumn foreigners and natives suffered from an epidemic of boils. Sometimes they were large and solitary, but more commonly appeared in successive crops. Except at the commencement, when the attack was often ushered in with fever of a sharp type which never lasted longer than twelve hours, the general health was unaffected, and as a rule complaint was only made of the local inconvenience, the neighbouring lymphatic glands becoming also enlarged and tender. The maturation of each boil occupied generally six to seven days, when it was either opened or its contents began to escape spontaneously. In scrofulous constitutions a marked tendency to leave livid marks and scars was noticed.

The causation of boils has been discussed by many dermatologists, and they have been ascribed to many agents, both local and constitutional. Skin affections attended by itching, the application of irritants to the body, pediculi, too frequent use of cold and warm baths, foul air, living in impure atmospheres, exposure to cold and wet, changes of the seasons, prolonged fatigue, derangement of the digestive organs, septic poisoning, over-feeding or starvation, &c., have all been enumerated among the causes. All these agents are doubtless in operation at times, but in the cases observed here malarial influences unquestionably played a prominent part, as may be gathered from the following observations. In one house, inhabited by several families, and situated in a malarious district, cases of intermittent fever and boils occurred simultaneously among different members of its inmates. On one or two occasions neuralgia preceded the outbreak of the boils, and many had an attack of fever ushering them in. If there was a recurrence of the paroxysm of fever no boils appeared, and when boils presented themselves there was an end to the fever. I believe it is a well known fact (although I have not seen any record of it) that in certain malarious districts in America an attack of boils is considered a safeguard against an attack of intermittent fever. Besides, in the constitutional treatment of some of the cases many remedies were tried, with which boils have been most successfully treated in Britain, without any result but disappointment. Quinine in combination with sulphate of magnesia and sulphuric acid, or quinine by itself, was found beneficial in all cases, not only in hastening suppuration, but also in preventing a recurrence of the attack. Liquor arsenicalis in conjunction with wine of iron also proved curative, especially in children, when the disease was associated with anæmia.



The question whether boils should be opened or not has often been debated, and while some surgeons recommend free incision, many adopt the expectant plan. Although at one time an advocate for the former method I have modified my views very considerably, being now disposed to think that each case should be considered on its own merits. In the case of large solitary boils as soon as the least sign of maturation could be discovered the knife was used, but when they were small and in crops, incisions were found to produce too much irritation, and were consequently avoided. In the case of the large solitary boils, which were always deeply seated, the unhealthy pus had greater difficulty in making its way to the surface than in the case of the smaller ones, which were invariably superficial and involved only a very limited portion of the subcutaneous cellular tissue. Incisions also had the disadvantage of leaving an ugly scar.

Several cases of old standing gleet were treated with remarkable success by quinine injections, as recommended in *The Practitioner* some months ago. One and a half grains of quinine were dissolved in one ounce of water acidulated with a few drops of dilute sulphuric acid, and used twice daily. For a time the discharge is slightly increased but usually disappears in less than a fortnight. The same treatment is very beneficial in causing fistulous tracts to granulate and heal up; and it is not less valuable as an eye-lotion in purulent ophthalmia, after the acute stage has terminated, when, for some time, there is apt to remain a muco-purulent discharge which obstinately resists all treatment. A drop of the above solution put into the eye night and morning will cure this diseased condition with amazing rapidity.

The following diseases have been treated during the last eight months:—

A.—GENERAL DISEASES.

Opium Smoking, .....	10 cases.
"    Poisoning, .....	2 "
Malarious Fevers, .....	22 "
Pyæmia .....	1 "
Anæmia, .....	13 "
Rheumatism, Chronic, .....	11 "
"    Syphilitic, .....	5 "
"    Gonorrhœal, .....	7 "
"    Muscular, .....	5 "
Cancer, .....	3 "
Syphilis, .....	7 "
Lupus, .....	3 "
Struma, .....	5 "

(2.)—Of the Digestive System:—

Thrush, .....	2 cases.
Ulcerated Throat, .....	7 "
Cancerum Oris, .....	1 "
Difficult Dentition, .....	2 "
Chapped Lips, .....	3 "
Caries of Teeth, .....	10 "
Supernumerary Teeth, .....	4 "
Fish Bone in Œsophagus, .....	1 "
Chronic Vomiting, .....	1 "
Gastric Catarrh, .....	5 "
Diarrhœa, .....	11 "
Dysentery, Acute, .....	2 "
"    Chronic, .....	3 "
Constipation, .....	8 "
Hiccough, .....	1 "
Fissure of Anus, .....	2 "
Fistula in Ano, .....	8 "
Hæmorrhoids, .....	6 "
Hernia, .....	4 "
Vermes, .....	4 "
Congestion of the Liver, ...	4 "
Hypertrophy of the Spleen, ..	6 "

B.—LOCAL DISEASES.

(1.)—Of the Nervous System:—

Headache, .....	2 "
Epilepsy, .....	3 "
Neuralgia, .....	17 "
Hysteria, .....	1 "

(3.)—*Of the Respiratory System:—*

Bronchitis, .....	14 cases.
Pneumonia, .....	5 "
Phthisis, .....	12 "
Hæmoptysis, .....	4 "
Catarrh, .....	7 "

(4.)—*Of the Circulatory System:—*

Atheroma, .....	1 "
Aortic Valvular Disease, .....	1 "
Varicose Veins, .....	3 "

(5.)—*Of the Genito-Urinary System:—*

Bright's Disease, .....	1 "
Irritable Bladder, .....	3 "
Gonorrhœa, .....	21 "
Spermatorrhœa, .....	1 "
Leucorrhœa, .....	3 "
Bubo, .....	6 "
Orchitis, .....	3 "
Epididymitis, .....	2 "
Menorrhagia, .....	4 "
Amenorrhœa, .....	2 "
Malformation of Penis, .....	1 "
Epithelial Cancer of Penis, .....	1 "
Phimosis, .....	2 "

(6.)—*Of the Cutaneous System:—*

Lepa, .....	2 "
Scabies, .....	7 "
Psoriasis, .....	3 "
Eczema, .....	18 "
Tinea Circinata, .....	9 "
Elephantiasis, .....	1 "
Carbuncle, .....	5 "
Furunculus, .....	47 "
Rodent Ulcer, .....	2 "
Leucoderma, .....	1 "
Herpes, .....	9 "
Impetigo, .....	3 "
Acne, .....	1 "
Chilblains, .....	1 "
Keloid, .....	3 "
Rupia, .....	1 "
Lichen Tropicus, .....	4 "

(7.)—*Of the Special Senses:—*(a.) *Eye Diseases.*

Catarrhal Ophthalmia, .....	15 cases.
Chronic " .....	5 "
Pustular " .....	2 "
Purulent " .....	3 "
Granular " .....	17 "
Phlyctenular " .....	2 "
Strumous Keratitis, .....	4 "
Chronic Interstitial Keratitis, .....	4 "
Ulcers of Cornea, .....	11 "
Leucoma, .....	21 "
Staphyloma, .....	7 "
Iritis, .....	3 "
Prolapse of Iris, .....	2 "
Cataract, .....	8 "
Atrophy of Optic Nerve, ...	1 "
Myopia, .....	3 "
Hypermetropia, .....	1 "
Blenorrhœa, .....	1 "
Ophthalmia Tarsi, .....	5 "
Laceration of the Lids, .....	1 "
Tarsal Cysts, .....	2 "
Pterygium, .....	3 "
Pinguecula, .....	2 "
Atrophy of the Globe, .....	1 "

(b.) *Diseases of the Ear.*

Otalgia, .....	2 "
Eczema, .....	5 "
Caries of the Bones of the Ear, .....	2 "
Deafness, .....	5 "
Polypi, .....	1 "

(8.)—*Diseases of the Organs of Locomotion,**Injuries, Tumours, &c.:—*

Chronic Strumous Arthritis, .....	1 "
Necrosis of Tibia, .....	3 "
Abscess, .....	37 "
Ulcers, .....	41 "
Sinus, .....	4 "
Sprains, .....	4 "
Bruises, .....	18 "
Necrosis of Jaw, .....	2 "

Contused Wounds,..... 11 cases.

Rupture of Scrotum,..... 1 case.

Fractures, ..... 4 „

Osteo-Sarcoma, ..... 1 „

For the following table of Meteorological observations I am indebted to H. Æ. SIDFORD, Esq., of H. I. M. Customs.

MONTHS.	THERMOMETER.						DAYS ON WHICH RAIN FELL.	PREVAILING WINDS.
	AT 9 A.M.		AT 5 P.M.		AVERAGES.			
	Max.	Min.	Max.	Min.	9 a.m.	5 p.m.		
May, .....	76°	51°	83°	61°	70°	75°	5	S.E.
June, .....	80°	62°	84°	68°	77°	84°	6	S.
July, .....	88°	75°	94°	81°	83°	87°	2	S.W.
August, .....	91°	76°	97°	76°	83°	86°	4	Variable.
September, .....	82°	65°	86°	66°	73°	76°	5	N.E.
October, .....	72°	47°	74°	48°	61°	64°	7	N.E.
November, .....	64°	31°	74°	33°	56°	54°	3	N.E., N.W.

*Rupture of the Scrotum.*—The following case of this rare injury has so unusual a history, that I relate it briefly. A young man, aged 27 years, was brought for advice in October last, with both his testicles protruding from his scrotum, and the right one greatly enlarged and inflamed. He informed me that a fellow-servant had inflicted the injury on him three days previously. His antagonist had thrown him to the earth, held him down with one hand by his queue, with the other grasped his genitals, then applied so much pressure that the walls of the scrotum with the *septum scroti* gave way and both testes remained protruded. The organs were replaced and the coverings with difficulty closed over them, and retained with sutures. The wound was dressed daily for about five weeks, when he was dismissed well. I am informed that among the lower class Chinese this is not an uncommon method of attempting to revenge an insult or injury. The assailant in this case made a speedy escape, and no trace of him could be got while the patient was under treatment.

*Opium Poisoning.*—One case of opium poisoning in a native female aged 25 was successfully treated. She was found early one morning in a semi-comatose condition, from which she could not be roused, and was brought to me for treatment. The quantity of opium which the patient had swallowed could not be ascertained, but her friends admitted that she was in a state of destitution, so that in all probability it was taken for suicidal purposes, and in quantity sufficient to extinguish life had active treatment not been promptly resorted to.

When first seen, about 8 A.M., her countenance was pale and cadaverous, her eyelids closed, pupils contracted to a pin hole and insensible to light, pulse slow and feeble, respiration almost imperceptible, the surface of the body covered with cold clammy perspiration, and she could only be roused from her stupor by repeated flagellation. As her friends strongly disapproved

of the use of the stomach pump, an emetic of sulphate of zinc was administered with difficulty, sinapisms were applied to the calves of the legs, iced water was dashed on her face, strong coffee administered when possible and men employed to drag her about. In half an hour after the emetic was given she vomited freely and repeatedly, and when the above treatment had been unremittingly continued for three hours she began to show signs of improvement. About 3 P.M. she was allowed to be taken away with strict injunctions to move her about for several hours longer, and some days afterwards I learned that she had quite recovered. Had I not been encouraged to persist in this simple treatment, the subcutaneous injection of atropine would have been tried.

The other case was that of a man aged about 35 years, who was attended in my absence by Dr. BRERETON of H.M.S. "Swinger." The patient was brought in a moribund condition eight hours after he had taken an unknown quantity of opium for suicidal purposes. Active treatment was persisted in for two hours, but without any avail, as he never recovered from his comatose condition, and died collapsed 10 hours after taking the fatal dose.

*B.*—Dr. Alexander JAMIESON's Report on the health of Shanghai for the half year ended 31st March 1875.

For the subjoined meteorological report, with the remarks appended to it, I am indebted to Mr. C. DEIGHTON-BRAYSHER, Assistant Harbour Master:—

MONTHS.	HIGHEST RANGE OF BAROMETER.		LOWEST RANGE OF BAROMETER.		THERMOMETER IN THE SHADE.		HOURS OF RAIN.	NUMBER OF GALES.	PREVAILING WINDS.
	Barometer.	Attached Thermometer.	Barometer.	Attached Thermometer.	MAX.	MIN.			
1874.	in.	°	in.	°	°	°			
October, .....	30.654	50.0	30.100	73.5	81.0	42.0	117	2	N.E., N.W.
November, .....	30.654	51.5	30.100	64.0	73.5	31.0	20	3	N.N.W.
December, .....	30.500	33.3	30.050	42.0	66.0	23.0	37	5	N.W.
1875.									
January, .....	30.500	34.0	30.000	47.5	54.0	25.0	29	4	N.E., N.N.W.
February, .....	30.400	37.0	30.050	46.0	56.0	27.0	77	3	N.N.W., N.N.E.
March, .....	30.252	42.0	29.850	60.0	74.0	32.5	92	5	Variable.

The instrument from which the barometrical observations were taken is a FORTIN's standard of  $\frac{5}{16}$  inch bore, No. 287. It is placed about 16 feet above the level of the river.

The rise during the highest spring tides at this port is from 11 feet 6 inches to 12 feet.

*Barometer.*—The readings for the last quarter of 1874 were unusually high, and changes slight though frequent. During the first quarter of this year the pressure was about the average, agreeing nearly with that for corresponding months in past years.

*Thermometer.*—The temperature varied with changes of wind, but was never very high nor very low for the time of year. It was above the average in the month of January.

*Rain.*—The rain-fall in October was unusually large for that month and the highest recorded since 1866. The weather during November and December was generally fine, and rains but slight. A glance at the following figures indicating the total number of hours of rain-fall for the months of January, February and March during the past nine years will shew how widely the limits range. In 1867, 169 hours; in 1868, 297; 1869, 298; 1870, 134; 1871, 64; 1872, 58; 1873, 124; 1874, 321; and in 1875, 198 hours.

*Gales.*—The gales during the last quarter of 1874 were 10 in number, though not heavy or attended with disastrous casualties. The number during January to March 1875 was far in excess of that for the same period of any previous year, though, with one exception, no gale was of long duration.

It will be observed that the weather during the six months presented nothing worthy of remark. The early part of October was wet, but November was, as usual in Shanghai, clear and

cool, while December was perhaps somewhat colder than is common in that month. During the first quarter of 1875 the days were damp and chilly, but the temperature, except on one or two nights, did not fall much below 30° F. Light rain was of frequent occurrence, and the second and third weeks of March were continuously wet. Disease of a very serious character was rife during October and the first half of November, but could not be attributed to meteorological conditions. Bronchitis was common in the first months of this year as also were neuralgia, conjunctivitis from cold, rheumatic affections, and of course coughs and sore throats. The malarial fevers and typhoid were common and severe during the last quarter of 1874, and occurred more frequently than is usual at that period, during the first quarter of 1875. In the earlier months of the half year remittent fever was found associated with intractable dysentery or followed by obstinate diarrhoea, and later on the cases observed were of at least average severity. In my last Report I drew attention to the facts that of late the severer type of remittent fever is approaching closer and closer to that of typhoid, and that cases of true typhoid are rapidly increasing in number. So far as I know only two foreigners were attacked by small-pox during the half year, although the disease was very prevalent among the natives resident in the Settlements. Partly in consequence of the ravages of small-pox, and partly, I am informed, on account of the Emperor's death, vaccination has been eagerly sought by the Chinese, 400 children having been vaccinated at the Municipal dépôt during the first three months of this year. Varicella occurred towards the end of March but did not become epidemic. The health of the Customs Staff was on the whole good. A case of hydrophobia in a tidewaiter is fully detailed at pp. 13-16.

After all that has been written about the dangers arising from unwholesome water, it is satisfactory to have to record that a plan by which it is hoped that the Settlements will within a short time enjoy the advantage of a pure supply, has recently been put forward. Whether the scheme will prove successful or the reverse obviously depends upon the amount of support accorded to it by the public. It is advisable, however, to come to a definite understanding as to what a water works company can and cannot do, lest expectations should be raised only to be doomed to disappointment. I therefore take this opportunity for considering the nature of the impurities which are found in Shanghai water and the best means of avoiding their ill effects. In the first place the impurities are either in solution or in suspension, and under each of these heads we find organic and inorganic substances. Thus,—

Impurities in Water.	Suspended	Inorganic; e.g., clay, sand;
		Organic; e.g., leaves and vegetable refuse, microscopic plants and animals;
	Dissolved	Inorganic; e.g., salts of alkalis and alkaline earths;
		Organic; e.g., salts of ammonia.

It is obvious that the most elaborate system of filtration will remove only the inorganic suspended matters, and the grosser organic impurities held in suspension. As regards all substances dissolved and all minute organisms, water leaves the best filtering beds in the same condition in which it entered them. Assuming that all that can be done by filtration is actually done, we have only to consider what is held in solution and the microscopic germs (if any) held in suspension. "Ordinary Shanghai drinking water" is reported by Dr. FRANKLAND (*Municipal Report for 1871, Appendix, page 37.*) to be "after filtration, unobjectionable from a chemical point

"of view, but swarming with bacteria and vibrios, and therefore to be regarded as suspicious if "not dangerous." The unobjectionable character of the water (after filtration) so far as regards dissolved impurities is further attested by Mr. CLEAVE, a member of the Pharmaceutical Society, and a most competent analytical chemist.

The total solid contents of this water (filtered through paper to remove mechanically suspended matters), are (dried at 100° C. as per table herewith,) 188 parts in 1,000,000, whilst that supplied by either of the water companies to London contains 291 parts in 1,000,000.

The nature of the solid contents compares favourably also, for in this there are but 12.1 organic matter per 1,000,000, while there are from 21 to 50 parts per 1,000,000 found in London water. Then, as to the constitution of the organic matter, I have carefully examined for nitrates, nitrites, and ammonia by permanganate of potassium, iodide of potassium and above all by Nessler's test (the most delicate known for nitrogen compounds) and have found that nitrates and nitrites are entirely absent, while of ammonia itself or its compounds only a trace is present, viz. 0.0004 gram per litre or 0.44 parts in 1,000,000, thus showing the superior quality of the water to that often employed in other countries. I have tested also for the presence of urica and albuminoid bodies, but have found them entirely wanting, thus showing the entire absence of sewage or night soil contaminations. From the very small amount of nitrogenous matter present, I conclude that the water in the "Woosung" below the Settlements at high water consists almost entirely of water from the "Yangtze," and from the small proportion of lime and magnesium salts present, that sea water must be completely absent.

In conclusion, I consider the water taken at high water from the "Woosung" and at some distance below the Settlements, to be well suited, after thorough filtration, for general use for drinking, washing or other purposes.

## ANALYSIS.

At 15.5° C. Spec. grav.	Total solid contents parts in 1,000,000 at 100° C.	Hardness.	Constituents of Solid Contents: Parts in 1,000,000.												
			Ca.	Mg.	Na.	K.	Al & Fe.	NH <sub>4</sub> .	CO <sub>2</sub> .	SO <sub>4</sub> .	Cl.	SiO <sub>2</sub> .	NO <sub>3</sub> .	PO <sub>4</sub> .	Carbon, Organic.
1.0002	188.1	6°	6.7	3.4	15.8	...	6.8	0.44	...	31.8	27.5	15.1	...	...	11.66

## OR CONTENTS PER BRITISH IMPERIAL GALLON.

Calcium Chloride,.....	1.40 grains.
Magnesium „ .....	0.96 „
Sodium „ .....	0.68 „
„ Sulphate, .....	3.40 „
Alumina and Iron,.....	0.49 „
Silica,.....	1.08 „
Carbonaceous Organic Matter, .....	0.90 „
Ammonia, .....	0.03 „
	<hr/> 8.94 grains.

The enquiry is thus narrowed to the presence of organic germs which pass unscathed through the ordeal of filtration. But here it has to be remarked that it was "the mud" of "the ordinary Shanghai drinking water" which "swarmed with bacteria and vibrios," and

hence after settling in suitable ponds for a sufficient time, the water passed through the filters would contain few if any of these objectionable but little understood organisms. The Shanghai Water Works Company binds itself to take its water from the river below Dow's godowns and on a rising tide. The water therefore which it will submit to filtration will be mainly Yangtze water containing only inorganic suspended particles without any organic admixture derived from the Settlement sewers, the junks, or the city, or from field drainage.

I may however for safety's sake assume that even under the most favourable circumstances water as delivered to the consumer would contain some low forms of life, and as I have by supposition reduced the objectionable ingredients in the water to these doubtfully present organic forms, I have only to enquire how to get rid of them. Now, while on the one hand PARKES (*Practical Hygiene*, 4th Ed., p. 27.) says, that "it is uncertain how far boiling will destroy the "poisons of the specific diseases" and quotes LEX to the effect that some bacteria move rapidly at a temperature of 260.6° F., on the other BASTIAN, who has paid more attention\* to this point than any living investigator, says (*Evolution and the Origin of Life*, 1874; p. 46)—"it has been "established that living protoplasm is certainly destroyed by sudden exposure to a temperature of "140° F. when in the moist state, irrespective of the nature of the fluid in which it may be immersed."

Although it is proved by Dr. BURDON SANDERSON and MESSRS. LEWIS and CUNNINGHAM, that the temperatures of boiling water and of boiling alcohol which are immediately fatal to all living particles are sustained for a few minutes without injury by fresh contagious matter, the doubt raised by PARKES and LEX need not trouble us so far as the Shanghai water supply is concerned, for—1°, the danger can be avoided only by care in the selection of a source, and the source proposed is clearly the least objectionable; 2°, no process to which water can on the large scale be subjected can influence these poisons, supposing them to be in the water; and 3°, their destruction is merely a question of sustained boiling. It is only for a few minutes that contagious matter can stand the temperatures given above.

The simple precaution, therefore, of boiling all the filtered water drunk either by itself or mixed with wine or spirits renders the consumer absolutely safe. The two processes should invariably be combined; first filtration and then boiling. The advantage of boiling water before drinking it was well understood even in ancient times. Thus HERODOTUS writing about 450 years before the Christian era, of a period a century earlier, says (i. 188) "The Great King when he is "on a campaign is supplied from home with provisions well prepared, and with cattle. Moreover "he carries with him water from the river Choaspes\* which flows past Susa, whereof alone and of "none other does he drink. And with this Choaspes water, *previously boiled* and stored in silver "vessels, many four-wheeled mule-carts are laden, which follow him whithersoever he marches." Even boiled water, however, should be drunk not later than 24 hours after boiling. "It cannot "be too distinctly understood that dangerous qualities of water are not obviated by the addition "of wine or spirits." (SIMON; *General Memorandum*, July 1866.) It is therefore clear that the functions of a water company are discharged when it (1) selects an approved source of supply;

\* Choaspes, amber stream,  
The drink of none but kings.

—*Paradise Regained*, iii, 288.



(2) removes all suspended organic and inorganic matters, microscopic organisms excepted; and  
(3) delivers its water free from impurities arising from faulty storage or carriage. It is further clear that dissolved matters as well as the residuum of suspended organic germs left after the process of settling, lie beyond its province, the former being, in the case under consideration, admittedly innocuous, and the latter being necessarily left for treatment by the consumer.\*

During the half year there were, as I gather from the Sexton's books and the Burial Register, 39 deaths distributed as follows through the months:—

BURIAL RETURN OF EUROPEANS FOR THE HALF YEAR ENDED 31ST MARCH 1875.

CAUSE OF DEATH.	OCTOBER.	NOVEMBER.	DECEMBER.	JANUARY.	FEBRUARY.	MARCH.	TOTAL.
Remittent Fever, . . .	1†	—	—	—	—	—	1
Aneurism, . . . . .	1*	—	—	1§	—	—	2
Heart Disease, . . .	2* 1	—	1*	—	—	—	4
Alcoholism, . . . . .	1	—	—	—	—	—	1
Dysentery, . . . . .	1*	—	—	—	—	—	1
Suppurative Hepatitis, .	1	1	—	1	—	—	3
Hydrophobia, . . . . .	—	1*	—	—	—	—	1
Infantile Cholera, . . .	—	1†	—	—	—	—	1
Chronic Diarrhoea, . . .	—	1*	—	—	m 1* f 1	—	3
Enteric Fever, . . . . .	—	1	—	—	—	—	1
Phthisis, . . . . .	—	1	—	—	1	—	2
Internal Cancer, . . . .	—	—	1	—	—	—	1
Croup, . . . . .	—	—	—	—	1	—	1
Continued Fever, . . . .	—	—	—	—	1	—	1
Accident, . . . . .	1*	—	1* 1	—	—	—	3
Drowned, . . . . .	1*	—	2*	—	—	—	3
Uncertified, . . . . .	1	2	1‡	1	m 1¶ f 1	3**	10
Total,.....	11	8	7	3	7	3	39

\* Non-resident. † Child 13 months old. ‡ Infant 2 days old. § Aortic. || Infant aged 31 months. ¶ Infant aged 17 months. \*\* Infants aged respectively 3 days, 8 months, and 7 hours.

From the total of 39, subtracting 13 deaths among non-residents, we obtain 26 as the mortality among residents for the period. One death from a gun shot accident has further to be withdrawn in order to get the total of deaths from disease among residents. And finally 8 deaths have to be subtracted as occurring among infants under 3 years old. The mortality from disease among resident foreign adults for the half year is thus reduced to 17 (15 males and 2 females).

\* Since the above was written the Ratepayers at their meeting of the 18th May 1875 refused permission to the Water Works Company to open the roads for the purpose of laying pipes, and passed a resolution authorising the Council to act in the matter of public water supply upon the basis of a Report from the Works Committee recommending the Soochow Creek as the source, with the power to shift to Lung Wha if desirable. That so vague a scheme will never be finally sanctioned appears to me certain, but meanwhile the residents in the Settlements are needlessly deprived of a pure water supply, which they could have availed of or neglected according to their own judgments.

The 3 deaths from abscess of the liver occurred at the ages of 35, 24 and 27. Two of the cases of heart disease noted under October were fatal at 31 years. The case of phthisis in November was fatal at 30, that in February at 40. The case of aortic aneurism in January was fatal at 43. In no other instance where I know the age does it appear to be of importance.

The additional risks to life, if any, entailed by residence in Shanghai are well worthy of attention both for the bearing of the question upon life assurance, and for the peace of mind of the foreign residents. It does not appear that as yet there is a sufficient array of facts to warrant a very decided opinion one way or another, but at least there is nothing to justify alarm in view of having to settle here for a term of years. I have reason to believe that when depressed by illness a previously vigorous man will often lose heart here and thereby seriously affect his chances of recovery, while were he to be attacked in the same way in England he would look upon his return to health as certain. The ratio of deaths between 20 and 30 to the total number of deaths is here far larger than in Europe, but this is due to the overwhelming majority of men of that age. The ratio of deaths from diseases of the heart and great vessels to the number of deaths from all causes is here higher \* than in Europe, but on the other hand very many of the diseases which are annually fatal in Europe to large numbers of men at the ages chiefly represented here, are here unknown. If we are to some extent unfortunate in one respect we are fortunate in other respects. At the same time it must not be thought that nowhere else do deaths occur at early ages from aneurism. In the *Lancet* of the 16th January 1875, Mr. MAUNDER of the London Hospital details a case of multiple aneurism—of each common carotid and of one popliteal—in a man aged 26, the subject of syphilis. Here there was a definite cause which I am persuaded is absent in a large number of our Shanghai aneurismal cases. There may be, and apparently is, a tendency to premature arterial degeneration † produced by residence in Shanghai, but while I am unable to offer an explanation of the fact, I would recall to the minds of professional readers their dissecting room experiences, which must have taught them how very frequently the aortic valves of adult subjects who have died of other maladies exhibit evidence of disease, and especially of thickening. We can make no truce with time, ‡ but so much remains in our hands in the way of health-influences that in the greater number of cases our ailments are directly or indirectly the fruit of our own imprudence or neglect. In my Report for the half year ended 30th September 1873, page 55, I quoted an important passage from one of MURCHISON'S lectures on functional diseases of the liver, to prove that early arterial degeneration is most frequently found among people who neglect or overtax their digestive functions. Violent exertion of an intermittent character contributes its share. Various constitutional states have also probably to be considered. But

\* In my Report for the half year ended 31st March 1874, page 37, I compared Shanghai with Hongkong and stations in India with regard to the prevalence of aneurism. I have since noticed (Note in HACKLEY'S translation of BILLROTH'S *Allg. chir. Path. und Therap.*, p. 536,) that during the 5 years 1865-1870, out of 11,344 admissions to the New York Hospital there were 33 cases of aneurism out of which 16 were aortic.

† "The instances of [early] grey-hairedness and baldness are so familiar that one is apt to miss their meaning as examples of a premature senile degeneration and death. Yet it is highly probable that what occurs in the hair occurs also, though it may be less frequently, in more important parts; and that as many look prematurely old with white hair, so some have a more gravely premature old age in the heart or lungs or nervous centres." PACER.—*Surgical Pathology*, p. 88.

‡ non ha tregua  
Con gli anni umana vita. TASSO.—*Aminta*.

this enumeration is useful only as indicating the lines of precaution to be adopted. Nowadays there is little excuse for a man who neglects his opportunities of taking an occasional sea trip. The digestive disturbances on which MURCHISON dwells are referable chiefly to imperfect oxidation of albumen, and sea air is unrivalled in its power of disintegrating the incompletely oxidised derivatives of nitrogenous food.\*

The health-reputation of a place such as Shanghai very much depends upon the inhabitants themselves. Setting epidemics aside, I am convinced that if every one did what his common sense prompts towards securing his own health and promoting that of his neighbours, we should soon hear but little of the dangers of Shanghai residence, while the doctors would much seldomer have to combat mental despondency, the increment of physical disease. Old residents have already witnessed several revolutions of opinion regarding Shanghai, but just as national reputation depends much more upon the character of the people from time to time than upon the original environment,† so our hygienic reputation will depend in the future upon the intelligence and energy which we devote to overcoming our local hindrances and availing of our local advantages.

The case of alcoholism which was fatal in October occurred in my practice, and I am free to confess that had I not been acquainted with the history through many months, and had the final seizure occurred during July or August I should have been unable to say that it was not a case of heat apoplexy. There were present heat of skin, frequent micturition, constant nausea, congested conjunctivæ, irregular pulse and respiration, and contracted pupils. Great restlessness was also observed, but had the atmospheric temperature been high this would probably have been exchanged for coma, and the diagnosis would have remained obscure. In this connexion I would draw attention to the facts noted by Dr. LITTLE at page 16 of the lately issued Report of the Shanghai General Hospital for 1872:—"It is noteworthy that this year there were several deaths from sun-stroke. Of the 12 cases coming under observation 8 died. Most of these cases when admitted were in a dying state, too late for treatment to be of any use. On enquiry it was found that in nearly every instance these patients indulged freely in alcoholic liquors." Dr. HENDERSON also in the *Health Officer's Report* for 1872, page 57, states that "by far the greater majority of these cases (fatal cases of heat apoplexy) have intemperance as a powerfully pre-disposing cause."‡ That the summer temperature experienced in Shanghai is not of itself the cause of serious disease is manifest from the fact that our hottest summers are not those which prove the most unhealthy, from a comparison of our highest temperatures with those of other places in China, and from the observations of travellers in other parts of the world. Thus LORTUS (*Chaldaea and Susiana*) states that at Bagdad the mercury often reaches 120° F. in the shade, and in June 1850 at a place a little south of Bagdad it often reached 124° F. Yet the Arabs living under these conditions are "healthy and warlike." The periods at which we suffer most

\* BENKE, cited by MURCHISON in *Br. Med. Journal* of 2nd May 1874.

† In the time of CICERO (*Epist. ad Atticum* iv. 15) Britain was considered fit only to produce slaves:—"Etiam illud jam cognitum est neque argenti scripulum esse ullum in illa insula neque ullam spem prætæ nisi ex mancipiis: ex quibus nullos puto te litteris aut musicis eruditos exspectare."

‡ The liquor obtainable by sailors and loafers in Shanghai bears some resemblance to the palm wine of Chaldaea described by XENOPHON (*Anab.* ii. 3, 15) 'perhaps agreeable but decidedly head splitting.'

are the spring and fall when the weather is changeable and uncertain. And it is interesting to note that this dependence of disease upon change of season was observed as early as the time of HERODOTUS:—"After the Libyans the Egyptians are the healthiest of all men, on account, as it seems to me, of the seasons, inasmuch as they are not variable. For diseases attack people especially during changes and most particularly during changes of weather." (ii. 77.)

The case of suppurative hepatitis fatal in October is briefly reported at page 17 of the last number of these Reports. The case of hydrophobia is fully reported farther on. The case of enteric fever occurred in a man convalescing from remittent who was sent to Nagasaki to recruit, and who there contracted typhoid which proved fatal shortly after his return to Shanghai. I presume that the case of "continued fever" was either typhoid or that form of fever which I have in my last Report ventured to call "typho-malarial."

That zymotic diseases will year by year increase within the Settlements in a ratio corresponding to the persistent overcrowding of all hitherto vacant lots by Chinese houses, admits of no doubt except on the part of those who despise the teachings of experience. Those who can, do well therefore in removing their private dwellings to the suburbs. The outskirts of Shanghai are constantly becoming more desirable, and it should be the object of every body who possesses a suburban villa to plant as many trees as possible in his neighbourhood. According to HUMBOLDT (*Aspects of Nature*) trees cool the air by protecting the ground from the direct rays of the sun, by evaporating fluids elaborated by the trees themselves, and by cooling the strata of air in immediate contact with them.

I am indebted to Dr. PICHON for the following report of a case of hydrophobia:—

At 8 A.M. on the 9th November 1874, I was summoned to a tidewaiter who was reported to have been furiously delirious during the night. The person who called me stated that six weeks previously the patient had been bitten by a dog which was supposed to be mad.

On entering his room I found the patient lying on a bed, dressed, at the farther end of the apartment, with a friend watching near him. On hearing my footsteps he started from the bed, and advanced on me with his eyes staring and with threatening gestures. His friend held him back, and informed him that I had come for his benefit, whereupon he abandoned his apprehensions and became somewhat calm. He told me in an excited manner that for three days he had not enjoyed a moment's rest and that although he was suffering from burning thirst he found that every attempt to drink threatened to choke him. He was, he said, the victim of extraordinary impulses and felt disposed to bite the table which was standing before him. In a few words he thus pictured his horrible sufferings.

Several of his friends came in to see him, but the presence of certain of them irritated him beyond measure. He dismissed them imperiously, forcing them by threats to leave his room. Paroxysms of fury recurred constantly, the slightest cause, such as a faint sound, sufficing to provoke them. It was therefore necessary to restrain him. Partly by threats, partly by promises of cure if he submitted to treatment, I succeeded in inducing him to lie face downwards on the bed under the pretext of injecting morphia into his thigh. In this position it was easy to seize him unexpectedly and to tie his arms and legs. The struggle of course brought on a terrific paroxysm, but the morphia soon produced its sedative effect. He himself stated that he felt better; he became less irritable and more manageable, he talked reasonably, and submitted to everything that he was told to do. He suggested that his arms should be put in a strait waistcoat, and offered no resistance to his removal to hospital.

It was now about noon. I ordered 75 grains of chloral in enema.

The patient was 32 years of age. He was of muscular build, and had always been well conducted. He had been 14 years in China, and had never been ill. He had been bitten in the leg by a dog 16 months

before, but the dog is still living. On the 23rd September 1874, he was bitten on the left hand by one of those stray dogs which are to be seen clustered in groups at the corners of the Shanghai streets. It is to be hoped that this terrible accident will direct the attention of the Municipal Councils to the important duty of destroying these dangerous animals. The bite produced a few superficial wounds on the back of the hand, but one tooth deeply penetrated the dorsal aspect of the third phalanx of the middle finger. He immediately returned home, carefully washed the wound, and cauterised it with lunar caustic. Then, satisfied with these precautions, he returned and killed the dog. The excoriations healed very rapidly, but the wound on the finger suppurated, became very painful, and cicatrization was not complete until after the expiration of three weeks.

On the 8th November, 41 days after the accident, he dined with a friend, when he stated that for several days he had suffered from watchfulness, that his appetite was gone, and that the sight of water produced in him a singular feeling of horror. He was, he said, so much afraid of it that that morning he had not dared to wash his face or hands. At dinner he ate fairly, but did not touch the soup. He tried to drink some tea but failed to swallow it; when pressed to try again he did so, but was compelled to reject what he took into his mouth. That night he went to bed about 9 o'clock. At midnight he woke in terror, thinking that natives were plotting some evil against him, and he turned out all the Chinese in the house. He begged his friends not to approach him, and complained of violent hypogastric pain produced whenever any one entered his room. The sight of his dog provoked a paroxysm of rage. He hunted him out, grinding his teeth as he pursued him, as though he would bite him.

Such were the symptoms which marked the stage of invasion.

I again saw the patient at 2 P.M., on the 9th. He had had a few moments of troubled sleep, disturbed by dreams which he tried to relate. He was quieter, but talkative and incoherent, which I attributed to commencing intoxication with chloral. The symptoms of hydrophobia became more and more marked. I offered him a glass of tea. The sight of it produced a laboured inspiration with sudden laryngeal spasm. He turned his head away with horror, complained of suffocation and of painful constriction of his throat, and evidently suffered severely. Neither light, nor brilliant objects affected him. I gave him a mirror, and asked him to look at his tongue, which he did without hesitation or trouble. His sense of hearing was particularly intensified. He complained of the noise around him, and the sound of water poured from one vessel into another produced a violent paroxysm. Suddenly approaching his bed, or passing a hand quickly before his eyes was sufficient to produce spasm of the larynx. He begged the bystanders to move away, the mere motion of the air seeming to give him as much pain as the sight of liquids.

In order to quench his thirst a little mop of lint soaked in tea was used. So soon as the liquid touched his tongue, deglutition was accomplished convulsively. He could thus swallow a few drops but at the third or fourth attempt the effort became too great, and he turned his head away for some minutes before asking again for drink. A great quantity of saliva (not frothy) ran from his mouth. His pulse was 120; his skin was moderately warm; the temples and forehead were bathed in perspiration. I now gave a second injection of morphia ( $\frac{5}{16}$  of a grain).

7 P.M.—Some relief had been again afforded by the morphia, but the patient had been unable to sleep. There had been one motion. Urine normal. Thirst was intense, and he constantly demanded to be put to sleep. He only wanted sleep, he said, in order to get quite well. I repeated the chloral (75 grains) and the morphia injection.

10th November; 5 A.M.—The patient had spent a bad night. Violent delirium alternated with calm intervals, during which he seemed to have all his senses about him. He arranged his business affairs and made his will. The paroxysms, however, were more frequent, and he had attempted to bite the finger of one of his friends who was giving him drink. 75 grains of chloral in enema.

9 A.M.—A certain quantity of milk had been swallowed. During my visit copious bilious vomiting occurred. There was now constant spitting of frothy and tenacious saliva which he scattered all round him, though carefully avoiding the persons of those who were attending to him. The bed, the floor and the walls

were covered with this characteristic sputum. The respiratory trouble became more marked. The thoracic muscles and the diaphragm were contracted spasmodically. Inspiration was deep and jerking, and the face was slightly cyanosed.

Several of the local practitioners, as well as a few French and English naval surgeons, saw the patient, and joined in consultation as to the best means of soothing his last moments. It was proposed to administer chloroform, but I considered this inadvisable lest the spasm should be increased and asphyxia immediately produced. Dr. LITTLE suggested the intravenous injection of the following solution, which fairly represents the composition of the serum of the blood:—

Chloride of Sodium,.....	60 grains.
Chloride of Potassium, .....	6    "
Phosphate of Soda, .....	3    "
Carbonate of Soda, .....	20    "
Alcohol,.....	60 minims.
Distilled Water, .....	20 ounces.

He hoped thus to mitigate the burning thirst which was one of the most distressing symptoms. The operation began at 11.30 A.M. The apparatus was of the simplest character, consisting of a receiver, an india-rubber tube, and a canula of about the size of a pigeon's feather. A spirit lamp and a thermometer adapted to the receiver made it possible to maintain the liquid at the constant temperature of 100° F. The right internal saphenous vein having been exposed close to the malleolus, a longitudinal incision was made in it, the canula was introduced, and the fluid was slowly injected. The rate of injection was regulated by the height at which the receiver was held. The vein having become impermeable at the end of ten minutes, the injection was continued by the corresponding vessel on the left side. By noon about 25 ounces of fluid had been introduced. During the entire operation the patient had given no sign of pain. He seemed even unconscious of what was being done. He was quieter and merely appeared pleased by the attention that was being lavished upon him. There remained about 20 ounces of fluid in the receiver. To this I added 45 grains of chloral, and the injection proceeded. At 12.30 P.M. all the fluid (45 ounces) was exhausted. The canula was withdrawn, and the wounds were being brought together when suddenly the respiration became sighing, the thoracic muscles were seized with a tetanic spasm, the face became livid and the patient died after a few convulsive inspirations.

The autopsy was performed by Dr. LITTLE, 4 hours after death. Nothing was observed except that the spinal cord was anæmic, and all the muscles gorged with blood.

The main points to be observed in this history are—

- 1°. The period of incubation extended to 41 days.
- 2°. The period of invasion seems to have lasted 3 days, and was marked at the onset by severe hypogastric pain.
- 3°. The various symptoms of rabies developed rapidly and with remarkable severity. The sleeplessness, thirst, hydrophobia, aerophobia, laryngeal spasm, and expectoration of hydrophobic sputa left no doubt as to the diagnosis. The delirium was characteristic. It was rather sub-delirium marked by incoherence of ideas and interrupted by lucid intervals. Although I examined the lower surface of the tongue I could find no trace of the sublingual vesicles known as *lyssa*. The wound on the finger had been long in healing, but no pain in the cicatrix had been complained of. Some authors lay great stress on pain as a sign of the disease, but here it was altogether wanting. I drew the patient's attention to the old wound at a moment when he was quite sane. He said that it had long been quite well, and the allusion to it appeared to strike him as uncalled for. It certainly excited no suspicion within his mind as to the nature of his disease.
- 4°. The morphia injections afforded momentary relief. The chloral enemata did not produce sleep, but at least induced anæsthesia. At first I attributed the patient's excitement and garrulity to

the action of the drug, but the condition presented an intermittent character incompatible with the idea of intoxication. The operation appears to have hastened the fatal event. Death occurred by asphyxia, but to what cause are we to attribute the latter? So many complications enter into the case that it is no easy matter to answer this question. Air in the veins is excluded by the absence of characteristic post-mortem appearances. The right saphena was blocked up soon after the injection began. Did it give rise to an embolus, producing secondarily a mortal obstruction? Ought we to attribute the rapidity of the event to the chloral? In observations now before me, relating to a case of rabies treated with intravenous chloral injections  $3\frac{1}{2}$  drachms of chloral were injected on the first day, and 5 drachms were on the second day injected within one hour and a half, a 10 per cent solution being employed. Yet the injection of the drug in these large doses proved absolutely harmless. I may also refer to the numerous observations made by M. ORÉ, whose bold innovations are now the theme of discussion at the *Académie de Médecine*. It is to be noted that in the case just reported, symptoms of asphyxia presented themselves before the operation. Hence whatever we may consider to have been the cause of the fatal asphyxia, its action was materially aided by the disease itself.

Readers of these Reports will recollect a case of hydrophobia reported by Dr. REID of Hankow, at page 31 of the 5th volume. In this the period of incubation was 47 days, and that of invasion about 36 hours. The disease, once declared, carried the patient off in about 14 hours. A great deal of attention has recently been directed both in England and on the Continent to the subject of hydrophobia. The most disquieting suggestion that has been made is one originally advanced in 1847 by a Dr. WRIGHT (*British and Foreign Medical Review*, vol. xxiii.) and resuscitated by Dr. MUSCROFT of Pontefract (*Lancet* ii. of 1874, pp. 513, 864), and by various American physicians. This is that under certain circumstances or at certain times the saliva of a dog apparently healthy and subsequently presenting no symptoms of disease, may, when applied to a wound, produce rabies in man. Dr. WRIGHT established, as the result of fourteen experiments, that whatever may be the case as between dogs and men "the saliva of a healthy dog is capable of producing rabies when injected into the veins of another dog," and Dr. MUSCROFT details two cases which as reported certainly establish the proposition with which he starts. The post-mortem appearances are mostly negative. ALLBUTT in two cases found the cortical substance of the brain in a state of granular degeneration, and HAMMOND of New York in one case verified this condition, and discovered also fatty degeneration of the nuclei of the 8th and 9th pairs as well as of the grey substance and nerve roots of the upper part of the cord. There were also extravasations of blood in the medulla oblongata (*New York Medical Journal*, September 1874). At the meeting of the *Académie de Médecine* held on the 21st July 1874, M. FÉRÉOL related the case of a physician who died of rabies after an incubation of two years and a half. In one remarkable case cited by the Messrs. GAMGEE (*Reynolds's System of Medicine* i. 340) there was a probability that the period of incubation was 7 years, and apparently a certainty that it extended to at least two years. Professor MACLEAN (*Lancet* ii. of 1874, p. 654,) gives six cases wherein the periods of incubation were respectively 42 days, 43 days, 40 days, 35 days and a maximum of 60 or 64 days in the fifth and sixth cases. In the paper by M. FÉRÉOL just alluded to, great stress is laid upon aerophobia as diagnostic of rabies. This symptom was well marked in Dr. PICHON's case. In the *Archives Générales de Médecine*, for November 1874, page 612, an instance is recorded (translated from the *Archiv der Heilkunde* for July) of rabies occurring 3 weeks after a bite, which in many respects closely resembles that now under review. The subcutaneous injection of

curare produced momentary relief, but the patient died on the third day after the symptoms declared themselves.

I take this opportunity of drawing attention to the important fact that the dread of fluids which is so marked a symptom in the rabid human being is seldom if ever present in the dog. FLEMING in his recent work on hydrophobia quotes a case related by BLAINE in which an eminent physician declared his opinion that a dog which had bitten three persons could not be mad, as it was able to drink. But it was mad, as was proved by its communicating the disease to a spaniel and a horse. FLEMING enumerates the following signs as symptomatic of the disease in the dog:—moroseness, restlessness, greedy desire for water, purposeless anger (biting at wood, straw, &c.), alteration in tone of bark, fury at sight of other dogs. As, until the Councils see fit to destroy all stray and unclaimed dogs, people will have to encounter the risk of being bitten by suspicious animals, I think it well to insist on the absolute necessity for *at once* sucking the wound made by a bite, at the same time compressing the neighbouring skin strongly between the teeth. If the place bitten be out of reach of the patient's own mouth, he should persuade a passer-by to perform the operation for him. Meanwhile some fuming nitric, sulphuric or hydrochloric acid should be obtained, and thoroughly rubbed into the wound, care being taken to explore every separate tooth impression with a bit of sharpened stick dipped in the acid.

The following case is one of unusual interest. I do not give it a name, as I am unable to tell what the disease really was. At the time, in spite of the mode of invasion I was disposed to consider it an instance of labio-glosso-laryngeal paralysis, but the termination in recovery negatives this view,\* and leaves the lesion altogether in the dark.

On the 9th October 1874 I was summoned to a little Eurasian girl, 4½ years old, whom I had on several previous occasions treated for various infantile maladies. She had always enjoyed good health, and there was no syphilitic taint. On the 8th she had been perfectly well, but at breakfast on the morning of the 9th it was noticed that she could not swallow. I saw her at noon, when her jaws were so firmly closed that I had much difficulty in forcing them apart sufficiently to liberate her tongue, which was severely injured. Having inserted a cork, I found that she was unable to swallow liquids poured over her tongue. I ordered her to be put for five minutes every half hour into a bath as hot as could be borne, and to have 5 grains of chloral every hour in enema. At 3 P.M. Dr. LITTLE and I saw her together. She was then drowsy, pupils normal, could move the lower jaw slightly. At 6 P.M. the condition was unchanged, except that there was some dyspnoea, mucus had collected in the throat and the child was unable to get rid of it by coughing. Next day at 7 A.M. there was some additional motion in the lower jaw, and about six ounces of milk had been swallowed in eggspoonfuls during the night. She was now ordered 7½ grains of chloral in enema every hour, and a hot air bath for 10 minutes every two hours. At noon the condition was the same; but by 6 P.M. the mouth could be opened, and the child was very drowsy. Temperature in axilla 100°; pulse 132. On the 11th at 8 A.M. the jaw was perfectly movable. In 42 hours 132 grains of chloral had been administered. The child was very sleepy. The chloral was stopped, but trismus having again threatened, the enemata were resumed at 1 P.M. At 6 P.M. the general appearance was much worse, there was constant restlessness, but the jaw was moved without any difficulty. She was ordered gr. ⅓ of hydrochlorate of morphia with 2 grains of calomel immediately. She slept well through the night, and began to play with toys at daylight of the 12th. There had been no stool since the morning of the 10th. She

\* "La terminaison toujours rapidement fatale dans la paralysie labio-glosso-laryngée." TROUSSEAU:—*Clinique Médicale*, t. ii., p. 345.

"Es fehlt bisher fast ganz an sicher constatirten Besserungen oder Heilungen." NIEMEYER:—*Lehrbuch der speciellen Pathologie und Therapie*, B. ii., p. 373.



was ordered 2 grains of calomel followed by a castor oil enema. On the 13th after a dose of oil the bowels were opened, and there seemed to be a marked improvement. She was sleeping well, and was lively during the day. During the following night she was sleepless, and at 10 A.M. on the 14th she was fretful and restless, and seemed unable to speak. Her mouth was hanging open and tenacious saliva was pouring profusely from it. She could not close her lips or move her tongue, the soft palate was immovable; she could not masticate, and swallowed with great difficulty, the milk which we poured into the pharynx being in part forced back spasmodically into the mouth and nostrils. Intelligence seemed to be unimpaired, although the immobility of the lower part of the face and the widening of the mouth imparted a stupid expression to the entire countenance. This state of things lasted until the 23rd October. She was obstinately constipated, requiring a castor oil enema every second day, but there was no paralysis of the bladder. Urine loaded with lithates (her food was exclusively milk, raw eggs, wine and strong meat essence, which she took in constantly decreasing quantity,) but otherwise normal. She was sleepless except when morphia in doses of gr.  $\frac{1}{2}$  was administered, but one dose was usually sufficient to ensure a calm night. The discharge from the mouth was purulent and horribly offensive, requiring constant syringing with a permanganate of potash solution. Ulcers formed on the inner surface of the cheeks, beneath the tongue and on the gums. No pain was complained of, but she occasionally cried without noise, tears streaming from her eyes. She constantly put her fingers into her mouth as if to withdraw something from her throat. At first she was anxious to be allowed to walk about the room, but her gait speedily became uncertain and tottering, which I now suppose was due to general weakness from insufficient nourishment, but which at the time I attributed to incipient paralysis of the lower limbs. Respiration was very feeble, and on several occasions suffocation seemed imminent from collection of mucus in the tubes, and the child's inability to cough. On the 23rd October there was a sudden and profuse hæmorrhage from beneath the tongue, and this was repeated on the 24th and 25th. I was not present on either occasion, but the most careful examination failed to detect the point in the ulcerated surface from which the blood issued. The condition was now desperate; the child exhausted by loss of blood, and almost unable to swallow, was nourished imperfectly, and with great difficulty on account of the terror they caused, by means of enemata. It is needless to say that medical treatment was altogether suspended. However, on the 27th she began to mend; power gradually returned first to the tongue, and subsequently to the lips and soft palate; the ulceration of the mouth healed, strength was slowly regained, and by the 5th November the patient was completely out of danger.

Confining oneself altogether to speculation regarding coarse changes, it is perhaps possible that here there was from some unknown irritation a sudden hyperæmia of the roots of the motor portion of the 5th, the 7th and 9th pairs or of the dura mater covering the basilar process and inner portion of the middle fossæ of the base of the skull. We might thus account for the initial spasm, and on the supposition, borne out by fatal cases, that this hyperæmia was succeeded by commencing atrophy of the roots or trunks of the inferior maxillary, facial and hypoglossal nerves, we might account for the succeeding paralysis. But we are compelled to assume in addition that the absorption of the tubules, the hypertrophy of the neurilemma and the proliferation of connective tissue which make up the usual course of events, were arrested (in consequence of the patient's youth?) and that integrity of nerve structure was restored. Amid such a maze of supposition I am content to leave the question of lesion without attempting to solve it.

*Tumour of lower jaw.*—A Chinaman aged 39, by trade a cook, was admitted to the Gutzlaff Hospital on the 23rd March 1875, with an osteo-sarcoma of the lower jaw extending from angle to angle and to a slight extent involving the perpendicular ramus on the right side. The bone was expanded to a thickness of  $3\frac{1}{2}$  inches at its greatest width, its interior being hollowed into numerous cysts, whereof one,  $2\frac{1}{4}$  inches long by 2 inches wide, formed doubtless by the breaking down of two or more, communicated with the cheek by a long fistula terminating in an ulcerated surface about the size of half a dollar. The deformity of the lower

part of the face was very marked, but the greatest amount of suffering was caused by the encroachment of the tumour on the floor of the mouth, displacing the tongue, and rendering speech and mastication almost impossible. The disease dated from five years ago. The patient was in a very feeble condition, partly from want of nourishment, and partly from opium smoking. It was therefore of the greatest importance to avoid hæmorrhage, and, owing to the care and skill of Dr. LITTLE, who was good enough to assist me in the somewhat formidable operation of removal, the amount of blood lost was remarkably small. On the 24th March, chloroform having been administered, the entire of the diseased mass was removed through an incision extending from half an inch above the angle on the left side to a corresponding point on the right side. The facial arteries and many smaller vessels were ligatured as soon as divided, the ligatures (of waxed silk) being cut short and left in the wound, the tumour exposed and removed by division of the jaw on each side at the limits of healthy bone, that is obliquely from immediately below the insertion of the stylo-maxillary ligament to a point just behind the last molar. The cavity was then lightly filled with lint, a ligature, which had previously been passed through the tip of the tongue, was retained until the effect of the chloroform had passed off, the flaps were united by five points of hare-lip suture, and several interrupted sutures, a drachm of laudanum was administered and the patient was removed to bed. Milk was taken pretty freely, and finely minced raw beef was subsequently added to the milk. Thirty-six hours after the operation, the lint was removed, the mouth having previously been kept clean by the frequent injection of a weak carbolic acid solution. A considerable portion of the wound had united. Syringing with the carbolic acid solution twice daily and dressing with lint squeezed out of a 3 per cent. solution of the acid in oil was the only treatment adopted. The sutures were removed on the 29th, 30th and 31st March, the entire wound having united except at the point where the original ulcerated surface had existed. A very profuse discharge of saliva set in on the 29th accompanied by slight fever. To check it a powder containing  $\frac{1}{15}$  grain sulphate of atropia with  $\frac{3}{15}$  grain of hydrochlorate of morphia and 2 grains of quinine was given and repeated in four hours with the effect of at once arresting the salivation. The drug having been omitted next day, salivation set in again, but was immediately checked by a third dose of atropia. During the progress of the case towards convalescence there was no further trouble experienced from this cause. On the 9th April the commencing formation of a fibrous or fibro-cartilaginous substance to replace the lost portion of jaw was very manifest. On the 10th the entire operation wound was closed, and there was no discharge of pus from beneath the tongue. The man was made an out-patient on the 6th May. He could then retract his tongue and protrude it slightly beyond the lips. There was very little apparent deformity, and ordinary food was masticated and swallowed without difficulty. On the 9th May the patient reported himself as quite well.

Several cases of opium poisoning were brought into the Gutzlaff Hospital during the six months. An emetic followed by strong coffee sufficed to ensure recovery in some instances; in others the patient arrived moribund, or actually dead (2 cases). At 10 P.M. on the 2nd April I was called to a man who had mixed up a quantity of extract of opium, variously estimated at from 3 to 6 mace, with a cup of tea, and had drunk the mixture three hours before. On reaching the hospital I found the man quite unable to walk, being dragged up and down the waiting room between two coolies. The native assistant had poured an emetic of zinc sulphate down his throat, which had operated not very largely, and the vomit had but a faint smell of opium. He was now unable to swallow, the surface pale, cold, and covered with sweat, he had an involuntary action of the bowels; the pupils were "pin-point," and quite insensible to light, pulse 40, respiration 11. I had him reclined in a chair, and while a solution of strychnia was being prepared, I washed out his stomach by a stream of cold water passed continuously through it. I then injected under the skin of the chest 20 minims of the liquor strychnia B. P. (gr.  $\frac{1}{4}$ ). Within 15 minutes he was able to swallow some strong tea, shortly after which he vomited violently. The pupils were now dilating, and contracted slightly when a candle was flashed before the eyes.

He was thereupon allowed to sleep, directions being given to re-administer the strychnia, and to send for me in case the breathing became stertorous. This was not necessary. He woke about 5 next morning complaining bitterly of thirst, and of pain in swallowing (doubtless from the irritation of the stomach pump tube) and left the hospital very feeble, but otherwise well.

To these cases I would add a bare notice of a curious variety of hæmophila occurring in a lady who during every pregnancy suffers from an excessively vascular growth springing from the inner surface of the gum between the second right upper bicuspid and the first molar, and during each confinement vomits alarming quantities (more than two pints) of grumous fluid consisting of a watery secretion from the stomach largely mingled with altered blood. The growth bleeds profusely as long as it lasts, but rapidly withers after delivery. Astringent washes and the application of dry tannic acid have no effect on it, ice checks hæmorrhage for a time, but on two occasions I have had at about the 6th month to ligature the entire tumour. Falling off in two or three days it was after each removal speedily reproduced, the hæmorrhage, however, being proportional to its surface, did not become serious before labour, when it stopped spontaneously. Under the microscope the growth is seen to consist of dense fibrous tissue sparingly vascular, but covered with greatly thickened mucous membrane *consisting at first sight of mere meshes of vessels*.

Stricture of the urethra is so common that every practitioner must see a great deal of it. I mention it here merely for the purpose of recommending a plan by which an instrument may sometimes be wheedled through an obstinate contraction of the canal. THOMPSON recommends the injection of half an ounce or an ounce of olive oil, "so that, if you can cleverly retain it with the finger and thumb, you may introduce the instrument when you have been unable in any other way." I confess I have never been able cleverly to retain it. But by partially filling the urethra with solid cacao butter pushed down to the stricture, I have often found an instrument which previously could not make its way, slip through by its own weight. In fact I now invariably adopt this plan when I encounter any difficulty.

C.—Dr. John DUDGEON's Report on the Health of Peking for the half year  
ended 30th September 1874.

THE number of deaths among foreigners in the Peking district for the period under review was three; one, a child, in August, of dysentery, very suddenly; another, an adult male, in August, the result of the accidental discharge of a gun, whose case is detailed in the body of this Report, the other the death of an American missionary lady at Tungchow (near Peking) in September, from apoplexy, caused by softening of the brain. She had been in an imbecile condition for a number of years. I attribute her condition to frequent miscarriages, there being six or seven in a less number of years before her mind gave way.

The health of the community, and especially of the Customs staff, has been excellent. There was some diarrhoea and a case or two of dysentery in August, caused by the sudden change of temperature, especially after rain, and from neglect to take precautionary measures. Heavy dinners, particularly in summer, iced beverages, fruit, chiefly when unripe, cold water, often not quite pure, sleeping on verandahs and being caught suddenly during the night by rain or a thunder storm, and sleeping without sufficient covering or without an anti-cholera belt, have been the principal causes. Attention to diet and clothing, sleeping in-doors, out of a draught, with a blanket over one, seem to insure immunity from these affections.

There was no epidemic, unless we except ague, which, as during the three or four former years, has been so prevalent here as to justify the epithet. Of the patients seen at the Peking Hospital there were in all during the six months 1,665 attended to for ague, or on an average about 14 per cent. of the aggregate number of patients, viz., 11,683. The percentage for the various months was, April, 2; May, 5; June, 12; July, 16; August, 25; and September, 24. FOWLER'S solution and quinine were both extensively used. Were it not for the poisonous nature of the former and the high probability that the Chinese would swallow toxic doses, in the belief that if a small dose did good a larger dose would do so much more good,\* the arsenical preparation would be the more advisable remedy in dispensary practice, inasmuch as it is very cheap and is even more active and certain when continued for a few consecutive times, than quinine. For Chinese out-patients, ignorant of the property of the remedies, of the true nature of the disease, and sceptical to some extent of foreign medicine, or, on the other hand, believing us and our drugs to be miraculous, it is of the utmost moment to cure them if possible

\* The Chinese use no very active or deadly substances, and being ignorant of chemistry possess no alkaloids or acids, and their drugs are usually ordered and taken in large bulk; hence the danger of our minute doses of violent remedies in their hands.

with one dose, and for this purpose quinine is the more serviceable medicine. I have come across two or three foreigners, and also a few Chinese, where the disease resisted all efforts to cure it with quinine, but gave way readily to the arsenite of potash. In a native hong in the southern city, muriate of cinchonine (HOWARD'S) is on sale. I have not been able to trace any of the spurious quinine reported in the south to Peking. Among the ague patients not a few have been confirmed opium-smokers. So much for the antagonism supposed to exist between opium and ague.

As usual in spring, there was some sore throat, tonsillitis, laryngitis and, also depending on change of weather, a good deal of parotitis. Some few cases of diphtheria and later on some cases of fever were observed, but neither of these affections attacked foreigners. In the spring openings are made here and there in the drains, especially in the lower parts of the streets where water is likely in the rainy season to collect. The effluvia from these open drains are cited by the Chinese themselves as the cause of these affections.

I have been more than ever struck with the frequency and comparative severity of hæmoptysis among Chinese and with the immunity which they seem to enjoy from its effects as usually seen in the west. They will be subject to this disease for years, following some of the roughest and most exposed occupations, although ultimately, I suppose, succumbing to pulmonary disease or the rupture of some larger vessel which proves fatal. I can hardly say I have ever seen in Peking either a case of heart disease or of aneurism. Probably the very quiet and abstemious habits, and mainly vegetable diet of the Chinese, may affect them favourably in this respect, and where hæmoptysis is not dependent upon a phthisical diathesis it may be said to be more the result of anger or of sprains, and hence the favourable prognosis.

*Chinese knowledge of cod liver oil.*—I called attention in the last Report (No. 8 of the series) to the knowledge possessed by the Chinese of the various species of lamnaria and their medicinal uses. In the Great Herbal no less than 31 different kinds of fish with scales and 37 without scales are mentioned. Among so many it would be strange if they had not discovered certain therapeutic virtues belonging to some. The cod is not known in Chinese waters so far as I know, and no oil is extracted from the liver of fishes. The use of fish and fish oil, particularly shad, in the cure of consumption may have originated in this way. The latter fish is called *man-shan* (鱈), *pai-shan* (白鱈), *shih-yü* (鯊魚), and when dry *feng-man* (風鱈). The Chinese consider consumption to be infectious, and account for it on the hypothesis that at the moment of death of the phthisical patient, a worm is expelled which enters the body through the breath of those in attendance. To stamp it out therefore, the patient, while still alive, was put into a coffin, buried or thrown into the river, and so infectious consumption was warded off the surviving members of the family. This may be the Chinese notion of its hereditary character. The author of the *Pên Tsao*, (Li Shih-chên), mentions a case of this kind as reported in the book called *Chi-shên-lu*, where several persons were so affected. The coffin with the consumptive patient was thrown into the river and was carried down as far as the Golden Hill, but happening to be seen by a fisherman who heard a noise proceeding from it, it was drawn on board. On opening it a beautiful young woman was found, who was put into the cabin of the boat and fed on *man-li-yü*. Her disease was cured and afterwards she became the wife of the fisherman. This fish possesses the virtue of killing insects and all sorts of worms that infest clothes and wooden or bamboo

articles of furniture. Mosquitos are killed by it. If its bones are put among clothes moths will not destroy them, and this is the rationale of its use in consumption. It is by virtue of its insecticidal or anthelmintic properties that it is prescribed also in fistula in ano, hæmorrhoids bad ulcers and prurigo pudendi. Oil of this fish is a most certain cure in pityriasis versicolor, the cure being effected instantaneously with one application.

*Worms.*—Speaking of worms, I wish here to add a note in relation to Dr. SOMERVILLE's very interesting researches into the filaria which infest the heart and circulatory system of the dog, filling the heart and blood vessels. When my attention was called to the subject I knew nothing about it, and the reply forwarded by me was necessarily negative to a large extent. Since then, however, after further enquiry, I am convinced that it must be far more common than I had supposed. As I then stated, the Chinese, so far as I know, not having recourse to dissection, are entirely ignorant of the cause, but admit that a large number of dogs do die under suspicious circumstances. They imagine that thieves throw them poison before venturing to break into their house, or that some person, with whom the owner of the dog is not on friendly terms, poisons the animal. In the British Legation a large number of pet Peking dogs have from time to time died suddenly, but I am not aware that even in these cases any post-mortem took place. I have enquired of mutton and pork sellers here and the answer I have got has been that they never observed worms in the heart or blood of the animals. In the horns of the sheep worms are sometimes met. I have consulted the Great Herbal but nothing very edifying, although plenty to amuse is, as usual, found there. One author there quoted, and he seems the great authority on worms, states that there are nine sorts which infest the human body. The first, called the *fu* worm, is in length 4 fên, and is the chief of his class; the second is called *yu* (魮), and measures from 5 to 6 inches. The presence of this worm gives pain above and below, and the patient has frequent inclinations to spit saliva or water. This one if it injures the heart causes death. The third is a little worm not quite an inch long, with small head and large procreative powers; the subject of this worm is languid and weak, has no animal spirits, and his back and limbs are feeble. When it grows to the length of a foot it is dangerous. The fourth is called the flesh worm, it resembles rotten apricots, and the subject of it sighs and is dull. The next is called the *lung* worm and resembles a silkworm, and a person possessed of it coughs and ultimately begets phthisis. The sixth is the stomach worm, and it resembles a frog and there is nausea, retching and vomiting with it. The seventh is called the weak or diaphragmatic worm, and it is like the ridges of a pumpkin, and the subject of it spits a great deal. The eighth is the red worm like raw flesh, and with it there is noise in the bowels when it moves. The ninth variety is the *jao* (蛟虫), small and like the vegetable worm. It is found in the large bowels, and causes leprosy, itch, piles, fistula, tabes, toothache. All the above worms reside in the stomach and bowels, and if a person is of good constitution no injury from them is to be feared, but if a person be weak, any disease may arise. The corpse worm lives in a person as long as he lives, when the person dies it also dies. It is the greatest enemy of man, and resembles the tail of a dog and a horse, or thin tendon, and lives under the skin, is three inches long and has a head and tail. When a person takes medicine this worm must first be destroyed, otherwise the medicines will be inefficacious. Lumps in the abdomen turn ultimately into worms. Another author speaks of these worms as like children, demons, frogs,

spiders, centipedes, ants, serpents, tortoises, hedgehogs, rats, bats, frogs, liver, blood, fibrin, dishevelled hair, silkworms, &c. They live and flourish and produce with water, and they are converted or dissolved by rain vapour. There are worms according to this writer in the very elements. In wood there are worms, and fruit contains the *tsao* (蠲) worm, beans have the *fang* (紡) worm, the cereals the *ming* (螟) worm. In fire there are worms, for we find rats in fire and flies are produced from ashes. In earth there are worms, scorpions and ants. Stones have worms. In water we have the tadpole and all fish along with tortoises and dragons. And it is related that a blacksmith on once breaking an iron pot saw a worm like the rice worm of a red colour in the iron, so that the five elements all contain worms.

Accidents of all sorts occupy a not unimportant place in practice among the Pekingese, especially fractures, dislocations, and wounds and burns. I subjoin a few short notes from our hospital case book of some of the more interesting. The foreign surgeon is consulted in all cases of this sort, from a general and settled belief that he is superior, in surgery at least, to the native practitioner, and from the fact that the native doctor, if such either exist or can be so called, has more faith in his skill for the cure of internal diseases which are hidden and hence beyond the ken and scrutiny of his patient, than for surgical practice. Indeed native surgery, consisting of acupuncture, the moxa and plasters, is relegated to druggists, street quacks and Mongols. A Mongol doctor and a surgeon are nearly synonymous. Fractures have been caused chiefly by falling houses and walls in the wet season and by the capsizing of carts in the very uneven streets of the capital. Mules and horses taking fright at camels and the consequent bolting of the former have been also common causes of such accidents. The narrow elevated central part of the roads, set apart for carts, with barely sufficient space for foot passengers on each side and between the up and down ruts, coupled with the long axletrees of the carts, and with deep ditches on each side from which the streets are watered, and which form reservoirs for the storing of water and preventing general inundation in the wet season, make accidents, fractures and cases of drowning very common. The wonder rather is that they are not more frequent. This is accounted for no doubt by the slow driving and the care exercised towards foot passengers, coupled with the dread of legal proceedings resulting from accidents. From the rigid observance of the law deaths and accidents on the streets from such causes form a grave inconvenience to public health and decency. The following is the list of fractures for 1874 as seen at the Peking Hospital:—

No.	SEX.	PARTS.	NATURE.	CAUSE.	RESULTS.	REMARKS.
1	Male, .....	Tibia and Fibula, ..	Compound, .....	Fall from scaffolding, ..	Died, .....	Pyæmia.
2	Female, .....	Radius, .....	Simple, .....	Cart capsizing, .....	Union, .....	...
3	Male, .....	Humeri, .....	" .....	Cart bolting, .....	" .....	...
4	" .....	Radius, .....	" .....	" " .....	" .....	...
5	" .....	Ulna, .....	Compound, .....	Wound with a knife, .....	" .....	...
6	" .....	Femur, .....	Simple, .....	Fall, .....	" .....	An old man.

The following table shows the dislocations for the same period:—

No.	SEX.	PARTS.	NATURE.	CAUSE.	RESULTS.	REMARKS.
1	Male, .....	Hip, .....	Backwards, .....	Fall, .....	Reduction, .....	Of 50 days' standing.
2	" .....	Lower Jaw, ..	Downwards, .....	Yawning, ...	" .....	...
3	" .....	Wrist, .....	Hand from carpus backwards,	Fall, .....	Partial reduction,	...
4	" .....	" .....	" .....	" .....	Reduction, .....	...
5	" .....	Elbow, .....	Radius outwards and upwards,	" .....	Partial reduction,	...
6	" .....	" .....	" .....	" .....	" .....	...
7	" .....	Lower Jaw, ...	Downwards, .....	Yawning, ...	Reduction, .....	...

The first case was that dislocation known as Sir A. COOPER'S, backwards into the sciatic notch, the symptoms being altogether less marked than the ordinary ilio-sciatic dislocation. The patient had been jumping over a pool of water and landed on his hip. The reduction, from the want of proper appliances and the length of time it had remained unreduced, was a matter of some difficulty. The last case was that of a beggar, an opium smoker, who sustained dislocation of the right side of the lower jaw while yawning. He was lying on the left side on a Jacob's pillow, about to inhale the narcotic fumes. It was of one month's standing and presented no difficulty in its reduction, although it prevented the patient from speaking and smoking. The unreduced cases, or those in which only partial improvement took place, were of more than one month's standing, and the valuable time had been spent in employing quacks, bonesetters, a fraternity flourishing here under the Manchu name of *chopan* 擦班, Mohammedans, Mongols, barbers and the court physicians.

Wounds of various sorts have been unusually numerous and severe during the year. The following are the cases seen at the hospital. Six cases of throat cutting; five cases of stabbing perpetrated by one individual, a Buddhist priest, resulting in the death of four persons. The various vital organs were injured in several places in each case. The lad who recovered was stabbed in the throat. The priest himself finally committed suicide by harakiri and also cutting his throat. He had rushed without cause upon one individual, and others going to the rescue and a crowd collecting, several received mortal injuries. There was one case of a man stabbed in the back in two places, and another, a policeman, cut in five places on the head and as many in other parts of the body, both of whom recovered. There was one right ear chopped off, another bitten off, and a third partly bitten off by a dog. The gun accidents for the year were, one an old lady who received a ball in the shoulder while passing a rifle range in a cart at some distance; the ball entered on the outside of the arm and penetrated downwards and inwards towards the axilla; one man with several grape shot in the skin; one man who had part of his hand blown away by the explosion of a gun, and one man, a European, killed by the accidental discharge of a gun. The last two cases alone deserve notice here. The reader will find most of the cases



more fully detailed in the Hospital Report for 1874. In the case of the explosion of the match-lock a portion of the thumb was carried away and the hand otherwise severely injured. The thumb, including its metacarpal bone, was amputated, the radial artery although untouched was quite exposed, and during the first night after the operation burst, causing considerable hæmorrhage. The accumulation of pus had probably caused its coats to give way. The patient rallied and the case for a few days did well, the wound assuming a healthy look and becoming smaller; shortly afterwards inflammation appeared above the wrist and extensive suppuration took place. The parts were washed and dressed with carbolic acid; tincture of cinchona with wine and soups administered and again the patient did well, when, after a few days, the above condition repeated itself on the back of the hand, attacking the tendons of the fingers and with a similar result. Under treatment he again improved, but now he began to be attacked with ague and diarrhœa, and when these were from time to time checked he always rallied in the interval, until finally inflammation appeared in the elbow joint, and the patient being very much reduced by the continuous discharges and the great summer heat, it became evident that all hope was gone and he was removed home, where he died a few days afterwards.

The other case occurred to one of the British Legation escort. Lying in wait one night for foxes, of which there are several in the Legation making nightly raids upon the poultry, he mistook a black cat for a fox, fired, lamed it and upon attempting to kill it outright with the butt end of his breech-loader, the second barrel was discharged into his heart, death following instantaneously. The body was not discovered till the following morning. Full particulars of the accident with post-mortem are given in the Hospital Report, along with the Chinese peculiar notions relating to the fox. The Chinese hold that reynard is not *canny*, that he can transform himself and bring about evil and misfortune to any one who injures him, and they therefore stand in great awe of him. I had a patient during the year labouring under fox disease. While squatting, he saw a fox pass him, and from that moment he took ill, had pains all over his body, his limbs shook, his appetite, sleep and usual buoyant spirits left him, he had visions and great fear gat hold of him. His brain was unsteady, and he felt that all he did was in imitation of the animal.

Accidents arising from attempted suicide by opium were five in number, of which one died. There was also one death from gold poisoning. The latter is a favourite mode of committing suicide in China. It is difficult to understand its rationale. Were it always gold leaf, we might suppose death took place from suffocation, and it may be so in some cases, but at other times I presume buttons and other gold articles are swallowed. Crude gold is said in the *Pén Tsao* to be poisonous, but prepared gold harmless. Another authority denies this and points to the fact that gold diggers frequently swallow gold without dangerous results, that in fact it is used medicinally, as for example in palpitation of the heart. The Chinese to account for the poisonous properties of gold suppose that serpents left their teeth in the stones where it is found, or that birds had deposited their dung, which is poisonous, on the stones, but these are shown to be mere idle rumours. We know that the salts of gold are strongly poisonous, but it is highly probable that the fatal result is owing to local injury rather than to absorption. I do not suppose that a chloride of gold could be formed in the stomach from pure hydrochloric acid present there. How are we then to account for the general belief

in its poisonous properties,\* founded apparently on an immense number of cases and extending over an indefinitely long period?

Among serious accidents, although neither from the knife, nor fire-arms, nor opium, I should mention here one of destruction of the perinæum and portion of the urethra, the result of a fall from a mat awning upon the leaf of a door, with recovery and formation of artificial or growth of a new portion of urethra. When the lad, about 15 years of age, was brought to the hospital, the perinæum was greatly discoloured, and a large sac of fluid occupied the region, giving the appearance of a double scrotum. On puncturing it a large quantity of bloody serum escaped. There was bloody infiltration into all the tissues surrounding the perinæum, and the back part of the scrotum was also involved. The bladder was hugely distended and no water passed by urethra. An opening was made into the perinæum from which large clots of blood were removed and from which urine dribbled. Poultices were applied and extensive sloughs came away, exposing the rectum and base of the bladder. The membranous portion of the urethra was completely destroyed, and part of the scrotum also ulcerated. Later on, a large abscess appeared in the abdomen above the ilium and Poupart's ligament and stretching upwards and backwards towards the right kidney. This at first discharged itself by the perinæal opening, but that becoming impervious, an opening was made into the abscess from without and a large escape of pus ensued. The large wound in the perinæum gradually contracted until it was thought advisable to introduce a catheter by the urethra into the bladder. The plan succeeded admirably, and in no long time the opening closed up almost thoroughly and the largest portion of urine passed by the urethra. Time improved this happy condition of circumstances, the perinæal opening permitting merely of the slightest leakage, while a good flow was maintained by the penis. The patient left the hospital about a month after the accident, comparatively cured. In a month more he returned to give thanks, with the fistulous opening closed, the slightest moisture being only observable. A month later he again presented himself with the perinæum watertight, the parts contracted and hard, but with some difficulty in passing urine. A catheter was introduced, and since then no complaint has been heard. Had he remained longer in hospital it would have been advisable for the first month or two to have repeatedly introduced the catheter so as to keep up the calibre of the canal.

Another case, similar to two previously mentioned which necessitated lithotomy, occurred in a lad 16 years of age. He had been in the practice of introducing a kind of bodkin, used by the male Chinese for fastening up the queue at night, into the urethra, to relieve a feeling of itching as he described it, of the urethral canal. The last time it escaped into the bladder, and eleven days afterwards he was seen, passing sanious urine and suffering acute pain in the bladder. The day after his admission, and just as I was about to perform median lithotomy, a swelling appeared in the perinæum, and on the day following in the scrotum also. I resolved to wait a day or two and observe the result. Fomentations were ordered and fluctuation was shortly afterwards discernible. A free opening was made in the position for lateral lithotomy, when a large quantity of fetid pus was discharged. A similar opening was made into the walls of the scrotum and with a like result. Fomentations were continued, and on passing urine the point of the bodkin was felt in the wound by the lad himself, but on attempting to secure it, it slipped again into the bladder. On passing urine a second time, one of the assistants

caught and extracted it. It was encrusted with a deposit. It measured 5 inches and tapered slightly to a point, the thickest portion being equal to a No. 9 catheter. The patient made a good recovery.

*Dysentery.*—The *Ailantus glandulosa* is very common here and grows readily and rapidly, attaining a considerable height. There are two varieties, one fragrant called ch'un (椿) the other foetid called shu (樺). The latter grows also on the hills and is called kao (樺). Another synonym for the tree is *tiger's eye* from the resemblance of the facets when the branches fall off from the main stem, to that animal's eye. It is also called *great eye varnish*. From this circumstance the French name *vernis du Japon* may be derived. The Chinese name here for the tree has no connexion with the word ailanto, which is supposed in Europe to be its native name in China and India and supposed also to mean "tree of the gods." It is intensely bitter and astringent, of a lukewarm taste and free from poison. It may be used as an antidote against sulphur, arsenic and gold. It possesses also anthelmintic properties, and is used in demonology against the transfer of disease from a corpse, against the poison called *ku* 蠱, in dysentery and diarrhoea, prolapsus ani, and leucorrhœa. It is sometimes prescribed alone in these various diseases and at other times in conjunction with other remedies, particularly *ti-yü* 地榆 or *radix hedysari*, a favourite remedy in diarrhoea and dysentery, which increases its efficacy. It is strongly recommended in all cases of hæmorrhage from whatever cause or whatever locality. It is diuretic also. It may be used in gonorrhœa and spermatorrhœa. The inner white bark of the root and stem of the tree—the non-fragrant kind—are the parts used. It is sometimes prescribed along with *kolilo* (ko-tze,) the fruit of *terminalia chebula*, also astringent,  $\bar{a}\bar{a}$   $\frac{1}{2}$  tael, the powder of 30 cloves, vinegar q. s., to be made into pills, of which 50 are to be taken at once, with congee. The inodorous species is also the ingredient in the *ku-chang-wan* (strong bowel pills). The following are a few of the prescriptions for chronic dysentery in which this remedy plays so important a part. Bark of the non-fragrant ailantus 4 taels, *kin-yin-hwa* (金銀花 flor. *leonicera chinensis*) 2 mace 5 cand., charcoal of *ti-yü*, *hung-hwa* (紅花 *carthamus tinctorius*)  $\bar{a}\bar{a}$  2 mace, *tang-kwei* (當歸 *rad. levistici chinensis*) 1 mace 5 cand., liquorice 5 cand., wine  $1\frac{1}{2}$  catties, water 3 cupfuls, to be boiled down to one cupful and divided into four doses, the whole to be taken in one day. In the dysentery of children, inside white bark of ailantus to be ground, mixed with water and made into small pills with jujubes. After seven doses the cure will be effected. In cases of incessant dysentery, day and night without intermission, the same bark is to be infused in river water for three days, the outside yellow rind to be scraped off, the inner skin to be dried, pulverised, and to each tael two mace of *mu-hiang* (木香 *castus amarus*) to be added and the whole made into pills with soft boiled rice; the dose to be 1 mace 2 cand., to be taken on an empty stomach with congee. In passing nothing but blood and the bowels painful, the recipe is, the white bark of the root, washed, scraped, dried, pulverised and made into pills with vinegar, and 40 or 50 pills to be taken on an empty stomach with congee. The above are for red dysentery. In red and white dysentery (blood and mucus) the same as the above without the vinegar, the dose of the powder being 1 mace, said to be very efficacious. In leucorrhœa it is combined in equal parts with *hwa-shih* (滑石 a kind of soapstone—*agalmatolite* containing alumina instead of magnesia, the true soapstone or *steatite*) and made into pills with rice, of which one hundred pills are to be taken.

The following is one of three standard Chinese prescriptions against dysentery:—

				mace. cand.			
R. Chw'an-hwang-lien, ...	}	āā	1	2	川黃連	rad. leontiae according to TATARINOV from Szechuen.	
T'iao-hwang-k'in, .....					條黃芩	rad. scutellariae viscidulae.	
Chih-pai-sho, .....					赤白芍	rad. paeoniae rubrae.	
Shan-cha-jow, .....					山楂肉	fruit of eratægus pinnatifida.	
Chih-k'o, .....	}	āā	0	8	枳壳	kind of citrus.	
Chw'an-how-po, .....					川厚朴	bark of magnolia hypoleuca.	
Chw'an-ping-lang, .....					川楝榔	betel-nut—perhaps another fruit is meant.	
Tsing-p'i, .....					青皮	fruit of citrus microcarpa.	
T'ao-jên, .....			1	0	桃仁	kernels of peaches.	
Hung-hwa, .....			0	3			
Chw'an-tang-kwei, .....			0	5			
Ti-yü, .....			0	5			
Shêng-kan-tiao, .....			0	5		liquorice.	
Water 5 cupfuls to be boiled to 2, 3 candareens <i>mu-liang</i> to be added and the whole mixed.							

The medicine is not to be thrown away but again used, 3 cupfuls of water being again added and boiled down to 1 cupful. The other two prescriptions contain very little variation.

The ailantus has been used here lately in a few cases by my friend and colleague M. DUGAT of the French Legation with considerable success in dysentery. The number of cases is not yet sufficient to warrant any very decided opinion, and pending a report of its virtues in this affection by the Paris Academy, to which it has been submitted, I abstain from further remark at present. I am of opinion, however, from its strongly astringent character, combined with rice and milk diet, which is enjoined, that it cannot fail to do good. The question is, if effective in such cases, is it owing to the rest and regimen or to the ailantus? From the above note, the facts of which are taken from the *Pên Tsao* and a Korean work on medicine, it will be at once seen that it is no family secret or patent medicine, but a well-known drug extensively used or at least well known by the Chinese. Credit is however due to M. DUGAT for bringing the virtues of the tree to the attention of French surgeons in the navy in Eastern waters and of medical savants at home.

*Leprosy.*—A case of tubercular leprosy was seen in a man named TSU, 35 years of age, who lives at the second lock on the T'ungchow canal. He has been afflicted with this malady for three years. It began on the left eyebrow with a kind of dark psoriasis, and the left half was anæsthetic. White ulcers broke out about two years ago, chiefly on the palmar surface of the hand over the first phalanges. These ulcers exuded a yellow fluid, dried and healed. During the last ten days new ones began to break out on the inner surface of the fingers; the feet and legs were swollen from the knee downwards, there were no ulcers on the foot; the nails of hands and feet were dry and dead looking and were filled up inside with dry skin. The face took on the strongly marked tubercular form only during the last year; the right eyebrow was completely gone; the hair of the head was falling off all round; he had no eyelashes, had a very little hair on the lower part of

the chin and half of the left eyebrow. There were tubercles also on the neck, but the trunk was free. He was engaged carrying rice and assisting boats at the lock and on the canal. In summer he was in the habit of bathing in the canal once or twice monthly. He has been married for eighteen years and has no family. He has one sister only, who is married and has three children. An elderly woman with one foot immensely enlarged and the integument greatly thickened with ulceration in several places, the whole of several years standing, was seen, which reminded one of elephantiasis. The male case was only seen once. The open sore in the latter case improved under cod liver oil and simple dressings, although the induration and enlargement remained pretty much as before.

This disease is here called ta-ma-fêng (大麻風). In the books the names *ta-fêng-chwang* and *lai* are met with. Mange in the canine species is termed *lai* 癩. The disease includes destruction of the nose, ulceration and altered colouration of the skin. It arises from three sources, climate, infection and defective nutrition. Five different forms are met with; in one the skin dies, indicated by loss of sensation; in the second the flesh dies, and no pain is felt in cutting it; in the third the blood dies, and ulceration and pus are formed; in the fourth the tendons die, and the hands and feet drop off; and lastly the bones die, and the nose is destroyed. Along with this the eyes, lips and throat become involved. Among the causes specified, some of which are made to correspond with the native theories of the viscera and elements, is the air of graves; its hereditary and infectious nature is also noted. The ancients called it *lai-fêng* 癩風 or *li-fêng* 癩風 on account of its malignity. In the treatment it is recommended that lepers live alone and attend to their proper nourishment. The celebrated Sun Sze-mao 孫思邈 treated from four to five hundred cases, all of which proved fatal. This fatality arose not from his inability to cure, but from the inattention of the patients themselves, who would not observe the rules he laid down and avoid all the various things that were forbidden, such as salt, fish, pork, &c. When leprosy begins it resembles pityriasis versicolor, and white skin falls off from the whole body like a serpent casting his skin. The sovereign remedies for *lai* are the leaves of the xanthium strumarium and abstinence from beef, horse, donkey and mule flesh. One prescription, to be taken on the first day of the treatment, consists of pai-chih (白芷, an umbelliferous plant, perhaps a kind of angelica), scorpions and ginseng; on the second day rhubarb, the root of the amomum and chan-t'ui (蟬退 feet of locusts), āā 1 tael 8 mace; tsao-kieh-tze (皂角子 sem. gleditschiæ sinensis), 1½ taels, mix, take 5 or 6 mace, and ta-fêng-tze yu (天風子油 oil from the seeds of chaalmugra) 1½ mace, a little saltpetre, a bowl of spirits, all of which is to be taken. Should there be belly-ache or diarrhoea, rice is to be taken to stop it. Persons below 50 years of age may take the above prescription; above that age it is not ordered, and very strong people may take such a dose three times in ten days. On the third day of the treatment a tonic regimen is ordered and the following is the prescription:—Ti-ku pí (地骨皮 cortex radicis lycii), king-kieh (荊芥 salva plebeia), k'u-shên (苦參 rad. robiniaë amarae), si-sin (細辛 heteropa asaroides), āā 2 taels; to this rub in 2 taels each of *luan-chung han-shui shih* (寒水石 stone from cold water?) sulphur, alum, shê-chwan-tze, with 5 mace of saltpetre, mix and add lard to the whole. Ta-fêng-tze yu is so called on account of its virtue in curing leprosy.

I am frequently asked by patients for aphrodisiac remedies. Chinese would do or give anything to obtain the power which by their early excesses they have prematurely lost.

This condition is especially found among the upper classes. Sometimes it is atrophy, the penis disappearing under the pubes, at other times it is shortening or impotence of which they complain; and again, it is the want of sons. The native practice in this, as in other respects, is strictly homœopathic—things in nature from their resemblance to things in man, who is considered a little world, are of course prescribed. And this theory is carried out in its fullest detail according to the Chinese philosophy; things according to their tastes, &c., being portioned out among the viscera that belong to such a taste.

For example, walnuts are ordered in disease of the testes; the Siberian crab in ulcer of the breasts; canine urinary calculi in want of tone of the heart, the theory being as above stated. The Chinese possess numberless aphrodisiac prescriptions. A noted one is called the "three all-powerful pills" or "three genital or divine pills" according as a certain character is used. According to the above homœopathic theory, the penis of the dog, ass and deer are much valued, possessing the properties respectively of hardness, length and strength. A bone is said to exist in that of the dog, which accounts for its hardness, the buck is said to be able to discharge his duty to the doe more than one hundred times consecutively, after which the doe seeks out a certain plant called the "efficacious precious grass," ling-chih, a kind of champignon, and gives it to the buck, who after eating it recovers his strength and vigour. The great object is to secure this buck, and scrape his tongue, and the extract so obtained is called "deer tongue extract." The Emperor Kienlung is said to have used this. Another remedy, included in this category, for procuring longevity and preventing the advance of debility is the "pine ceiling dew," which was also administered to the above named Emperor. A hole is dug under a fine old fir, the central root is taken, a jar of wine is placed under it and a fire under this again; the alcohol fumes enter the tree with the sap, and the leaves for a few days assume a marvellous green tint. In a few days more the tree dies, the sap on returning distils into the wine jar and this is drunk for the above purposes.

Among anaphrodisiac remedies the Chinese enumerate mercury, camphor, hare's flesh, and two plants are particularly mentioned, the *küeh-ts'ai* 蕨菜, a kind of edible fern, and the *chi-ts'ai*, 薺菜, *hou-tuynia cordata*. Among aphrodisiac remedies the following are specified: cloves, flesh of sparrows, the testicles of the deer and sea-dog, aconite, *fu-p'ên-tze* 覆盆子, fruct. humuli, *t'ien-hiung* 天雄, a kind of aconitum. The three last bestow strength and length. Marrow of the bones of the head of the deer is strongly tonic and efficacious in obtaining sons, the penis of the dog and umbilicus of the *wên-nei* (鰓 鰓 sea-dog genitals) are effective remedies where length and sons are desiderated.

The native works are rich in prescriptions for rendering parturition easy and for procuring abortion, the more powerful of the first class becoming abortive agents and the milder of the latter becoming accelerators of labour. The *Pên Ts'ao* enumerates about 50 different substances in each class, drawn from the various kingdoms of nature, and some of which have obtained some reputation. Private recipes belong to the class of secret remedies, and are doubtless taken from the Great Herbal or compounded of a few of the substances there specified. In the first class the seeds of balsamina (or *impatiens balsamina*) are strongly recommended. Such substances are specified besides as ginseng, sandarach, kernels of *crataegus* and peach, musk, camphor, oak bark, hemp seed, gypsum, the *cyperus rotundus*, umbellifere, *leonurus*

sibericus, seeds of *tribulus terrestris*, a species of arum, roots of *sida tiliaefolia*, seeds of *gleditschia sinensis*, *ophiopogon spicatum*, *rehmannia glutinosa*, &c. And as the sublime and ridiculous are always in China connected, the following substances also find a place among parturifacients: various fossil products of the southern sea, the claws of a white fowl, horns of an antelope, fresh water turtle, tortoise, hippocampus, flying fish, a kind of nitrate of potash, fruit of the *sophora japonica*, rice husks, lotus flowers, large beans found in cow dung, hair of white cock, albumen, blood from the comb of a black cock, blood, brains, skin and hair of a rabbit, ashes of a Chinese pencil, rat, mule's hoof, dog's hair, of the wooden handle of any utensil, and of old straw slippers, blood of a white dog and of a pig's heart, human urine, honey, bile pills, ink, iron utensils, ancient cash, rust of spades, arrow shafts, bowstrings, baskets, cart oil, husband's garters, the parturient woman's nails, serpent's skin, deer's dung, lard, mud from a well, water in which children have been washed, &c., &c.

The remedies specified under the second class as rendering labour easy proceed upon the theory of their being emollient, demulcent, soothing, &c., and therefore calculated to be advantageous in labour. In this class, the seeds of *pharbitis nil* and the seeds and flowers of a mallow stand first, along with the white bark of the elm, the seeds of *hibiscus abelmoschus*, plantain, *sorghum saccharatum*, a kind of bean (*dolichos*) cultivated here, but according to TATARINOV the seeds of *abrus precatorius*, horse betel-nut (a fruit from Yunnan), arrowroot, the Chinese pink (*dianthus fischeri*), seeds of the winter cherry, *akebia quinata* according to HOFFMANN and SCHULTES, *rad. clematidis sinensis* according to LOUREIRO, *aralia papyrifera* (pith-paper plant), *alisma plantago* (a water plant), *portulaca oleracea* (purslane), leaves of a kind of box tree (*buxus*), seaweed, wheat sprouts, soapstone (*agalmatolites*), *typha angustifolia*. Besides these remedies the following substances are specified: honey, castor oil seeds, the patient's shoes, an ant hillock, cow dung, salt, soot, a bridle, the refuse water after grinding knives, skin of a red horse, of an otter, the patient's trousers, her hair, mud from the front of a busy shop where animals and men congregate, &c. There is also a stone called *fu-shêng* taken by parturient women to expedite labour.

The remedies in the class of more direct abortives are four different kinds of aconite, (in the *Chih-wu Ming-shih T'u-k'ao* four are given as synonyms for the same plant, but the *Pên Ts'ao* makes a difference between them,) roots of arum macrorum, pentaphyllum and other species of arum, *corydalis ambigua*, legumes of *psoralea corylifolia*, *phytolacca*, *radix pupaliae*, *geniculatae* according to TATARINOV, or *achyranthes aspera* according to HOFFMANN and SCHULTES, *rhododendron* according to HANBURY, and henbane according to TATARINOV, bulbs of a beautiful cucurbitaceous climber with yellow flowers common here, Job's tears (root of *coix lachrymalis*), the roots of a kind of *rubia* (madder plant) used for dyeing red, *carthamus tinctorius* (safflower or bastard saffron), *rad. sacchari spicati*, bark of *paeonia moutan*, *rad. euphorbiae*, *cyperus* (sedge-grass), dried ginger, cassia buds, dried Chinese varnish (a kind of rhus), fruit of *sophora japonica*, croton oil, a kind of *xanthoxylon* (Chinese pepper shrub), *cantharides*, *scolopendrium*, a large number of insects, caterpillars, lizards et hoc genus omne, *sal ammoniac*, mercury, realgar, orpiment, nitre, red hematite, bezoar stone (of oxen), a kind of *styrax*, *passerina chamædaphne*, &c.

ABSTRACT of Thermometrical Observations, taken at Peking by the writer, from  
1st April to 30th September 1874.

1874.	MAXIMA.		MINIMA.		AVERAGES.		RAINFALL.	
	Day.	Night.	Day.	Night.	Day.	Night.	Day.	Amount.
April, .....	87°	59°	66°	31°	75°	46°	1	a little.
May, .....	93°	64°	65°	42°	79°	55°	12	18 inch.
June, .....	100°	72°	70°	57°	89°	67°	10	1½ "
July, .....	96°	76°	75°	62°	87°	70°	12	11 "
August, .....	95°	75°	78°	61°	88°	69°	10	5 "
September, .....	90°	67°	66°	54°	80°	61°	6	3 "

REMARKS.—The total rainfall in the period was over 21 inches, and the number of days on which it rained was 51, less in quantity and a fewer number of days than in 1873, there being over 34 inches of rain in 55 days in the latter year. The hottest day was June 21st, the only day in the year when the thermometer reached 100° F. The hottest night was July 23rd, when it stood at 76° F. The heat was less than in the previous year, although both by day and night a slightly higher average is indicated.



*D.*—Dr. John DUDGEON's Report on the Health of Peking for the half year ended  
31st March 1875.

I AM happy to be able to report no deaths in the foreign community during this period. The winter on the whole was not a severe one, although protracted. The frost was not so intense or long-continued as in some former years, yet the average both by day and night was on the whole lower. Our winter set in very early and very sharp on the 23rd November, the thermometer falling from 34° on the previous night and 45° by day, to 16° at night and 31° by day. The upper part of the Peiho was frozen over and did not again open. This is the earliest closure of the upper reaches of the river that we have had to chronicle. The thermometer gradually rose again to as high as 27° at night and 49° by day, until the 24th December, when it fell by night to 10° and by day to 28°, and for the last five days of December to 4°, 7°, 6°, 3°, 7° respectively by night and to 20° by day. The following table will give at a glance the results of observations taken during this period.

ABSTRACT of Thermometrical Observations taken at Peking, in the open air, facing North, in Lat. N. 39° 55' and Long. E. 116° 27', or 7 h. 45 m. 50 s., from 1st October 1874 to 31st March 1875.

1874.	MAXIMA.		MINIMA.		AVERAGES.		RAINFALL.		SNOWFALL.	
	Day.	Night.	Day.	Night.	Day.	Night.	Days.	Amount.	Days.	Amount.
October, .....	75°	59°	45°	30°	64°	46°	5	1¼ inch.	...	...
November, .....	56°	38°	31°	13°	47°	28°	1	1¼ "	rain	and snow.
December, .....	49°	27°	20°	3°	37°	19°	...	...	2	a very little
1875.										
January, .....	38°	18°	26°	8°	34°	13°	...	...	1	a very little
February, .....	46°	28°	33°	11°	39°	17°	...	...	3	2½ inch.
March, .....	65°	39°	42°	20°	54°	31°	5	½ inch.	...	...

One of the most notable things that occurred during this period was the death of the Emperor of China, barely 19 years of age, asserted to be from an attack of small-pox, which, as in former winters, has prevailed more or less extensively and epidemically. This disease seems to have existed as a severe epidemic in the east of Asia, just as it did in the west of the old world last year. The Emperor of China was attacked with the "heavenly flowers" on the 9th of December, the day of the Transit of Venus. The eruption made its appearance on this day, but the latent period would naturally be traced back to the audience granted to the U.S. and Japanese Ministers, and it is not at all improbable, always supposing that the disease was as stated, that he caught it on his way to the Audience Hall, which is outside the Forbidden

City or palace proper. The two coincidences are strange, and by the Chinese considered nothing less than miraculous, and a severe blow to foreigners who have always laughed at the pretensions of the "Son of Heaven." The Chinese state that this is not the first monarch who has died, as it were, astronomically. Several are mentioned in history, whose deaths coincided with certain strange phenomena of the heavenly bodies. In China, as in India, only courteous and polite language is applied to small-pox, for fear of offending the goddess that is supposed to preside over it. In the "Court Gazette," the Imperial illness was described as the enjoyment of the felicity of the heavenly flowers. Many, no doubt, imagine that an attack of this disease demonstrates the favour of the *niang-niang* towards the fortunate individual. On the 15th day of the disease burnt offerings of all kinds on a most elaborate and expensive scale were offered to the goddess on the convalescence of the Emperor. A relapse, however, took place, and he died on the 12th January. At the time of his supposed recovery honours and emoluments, money and peacock's feathers, collars and buttons were profusely bestowed; on his demise, all were withdrawn, and a memorial was even presented to the throne to have the two medical men, court physicians, and members of the Great Medical College, who were in attendance, severely punished. They were, however, not to blame, they treated their august patient *secundum artem*, and of course could not deviate from the beaten track laid down in their absurd but ancient system. The more enlightened natives, who ridicule the learning and prescriptions of the faculty, have not hesitated to say that he was killed by the doctors, or that, which is the same thing, he died on the point of etiquette or rule. Rumours of all sorts were afloat regarding the nature of the Imperial illness, but without more evidence than has yet come to light it is more prudent to adhere to the original and published diagnosis. It has been said, and apparently with truth, that he had small-pox when a child at school. His attack has at least demonstrated the fallacy of the Chinese belief that only children are subject to it. It may be said, however, that there was much in many of the symptoms to throw suspicion on the nature of the disease, and the banishment of several eunuchs afterwards, as being accessory to the Emperor's death, lent a colour to these suspicions. The present little child Emperor has been vaccinated, and we learn also that the Emperor and Empress of Japan have been vaccinated since the news of the death of the "Son of Heaven."

In the first of these Reports I gave a note on the history of small-pox. I will now merely make a few additional observations. The Chinese recognise small-pox and measles as depending upon a poison inherited from the parents, which resides in the system till it is developed by external exciting causes, like fire concealed in the flint. This theory, however, does not comport with the facts which they themselves must have observed, viz., that some do not take small-pox, and that it ought to have been a disease coeval with the race, whereas, by their own showing, it cannot be traced farther back than the end of the Chow and beginning of the Ts'in dynasty. But as I have already shown, it is not even so old as this by many hundred years. As a prophylactic against it, or at least to render the attack slight, it is recommended to eat cinnabar, or the dried umbilical cord and placenta, hare's flesh, cobwebs, &c.; against its onset, when it is feared it cannot be averted, especially at the approach of each winter, and particularly when the weather is mild and an unhealthy spring is feared, when it chiefly prevails, beans are to be eaten. During last winter the beginning of December was especially mild, and during the winter and up to almost the middle of February no snow whatever had fallen. Beans, I may add, are considered an antidote

against all poisons. But independent of the supposed foetal poison, the books recognise it as epidemic, depending, as they express it, on the air of the seasons. They enumerate five sorts of the disease, which are made to correspond with the five viscera (lungs, heart, liver, stomach and spleen, and kidneys). They divide the duration of the disease into periods of 7 days, one period of incubation, one of development and one of decay. The condition of the pustules and of the patient, the favourable and unfavourable symptoms are all carefully and minutely noted. The period of convalescence comes, and minute directions are laid down as to the contra-indications in regard to eating and drinking, avoidance of smoke and dirty water in the room, combing of the hair, sexual intercourse of the parents, the advent of the menses, the smell of wines, spirits and urine, sulphur and asphyxiating medicines. Among unfavourable symptoms are enumerated hoarseness, pain in the throat, back and abdomen, convulsions, nausea, diarrhoea, cough, asthma, thirst, tonsillitis, voluntary perspiration, itch and pain, the pustules ulcerating, rigors, biting the teeth, hæmoptysis, scanty urine, constipation, retrocession of eruption, the blackening and depression of the pustules. To preserve the eyes from the ravages of the disease, a plaster is used encircling the eyes, the idea being to limit and prevent the pox from crossing over and attacking them; to prevent pitting, the oil of the seeds of the man-tsing are used, with which the parts are smeared, or the face is ordered to be washed with water in which shellfish have been steeped.

Next to small-pox in importance and before it in frequency, as far as it came under my observation among the foreign children and at the dispensary, was whooping cough. A few of the foreign children were attacked after the new year set in, and all did not get rid of it till the milder weather in March made its appearance. It is always a very mild affection here and I have never known of any death resulting from it, at any rate among foreign children, except in the case of one child, a year old, where it was complicated by bronchitis. It seems to have existed as an epidemic, judging from the numbers of native children seen labouring under the affection. The people make no distinction between ordinary cough and pertussis, except perhaps indicating its severity, long continuance and tendency to vomiting as contrasted with simple cough. At the most it is only recognised as a severe form of cough; they do not seem to be aware of its epidemic or contagious and infectious character. The sound emitted is said to resemble the waterfowl, and it is on this account that it is called *hsiao*. Asthma is described as short, rapid breathing without intermission; *hsiao* as by turns or fits ending in vomiting. When asthma becomes chronic, say after three years, and the patient cannot sleep on account of the disease, it is termed *hsiao* asthma. In this chronic form, the following prescription is recommended: arsenic, 1 mace; bean-curd, 1 tael; pork, 4 taels; divide into three portions, roast and add flour with which to make pills. Those who would recommend anti-periodic remedies in whooping cough, such as quinine, as has been done lately, will be struck to find the Chinese prescribing an arsenical treatment. Eight different kinds or causes of asthma are enumerated, in the following order:—cold or wind, phlegm, air, water, chronic debility, injury and weakness of the stomach. In hiccough, called *kai-ni* (咳逆), irritation of the nose or stopping the breath are prescribed, and we can all testify to their value. In chronic asthma medicinal fumigation is ordered. In the following prescription the compound is to be smoked, nan-sing (南星 tubers of *arum pentaphyllum*), kwan-tung hwa, o-kwan shih (鵝管石), fo-rh ts'ao (佛耳草 *gnaphalium* according to HOFFMANN and SCHULTES), realgar, 2 candareens; to be ground, add *artemisia*.

and a slice of ginger and inhale the smoke. If there should be no fo-rh ts'ao, yü-kin (rad. amomi?) may take its place. Here is the germ, nay the very practice of smoking stramonium leaves. The fo-rh ts'ao is, according to some botanical authorities, the stramonium. It is remarkable what a large number of foreign substances have found their way into the Chinese herbal. Some were introduced from India by the Buddhists and others during the Yuen dynasty, when the Mongol armies overran Asia and part of Europe, and a Mongol Khan sat on the throne of China. The names are foreign, many of which can be easily identified. Chinese indigenous substances are as a rule indicated by one character, whereas the names of foreign articles in Chinese are made to represent the foreign sound. The datura above mentioned (man-to-lo 曼陀羅 in the Buddhist classics and of course in the *Pên Ts'ao*) is one of this class. On account of the shape of its leaves it is called fêng-kieh and shan-kieh (風芥, 山芥). It is recommended in all wind diseases (convulsions). When eaten, unconscious laughter is set up, and the person acts as if intoxicated. It may be used as an anæsthetic. It is employed in infusion with which to wash the feet, it is also applied to ulcers of the face, in convulsions of children and in prolapsus ani. Speaking of anæsthetics, I would here mention another substance, also of foreign origin and likewise possessing remarkable properties, and that is the cannabis indica. It is called in Chinese books *ta-ma* (大麻), the great hemp; also *hwo-ma* (火麻), fire hemp; *han-ma* (旱麻), a word not unlike the German hanf and our hemp, (the sounds hannap and kannap seeming to run through nearly all languages to indicate hemp); the male plant is called *si-ma* (象麻) and *p'in-ma* (牝麻); the female, *k'ü-ma* (雌麻) and *tze-ma* (仔麻); the flowers are called *ma-pên* (麻蕒) and *ma-po* (麻勃). *Ma-pên* has also the synonyms of *ma-lun* (麻輪) and *ts'ing-ko* (青柯). *Ma-po* will cure every sort of bad vapour; it is an antidote against forgetfulness, confers prophetic powers, and will give a knowledge of what is about to happen in the four quarters of the globe. A statement handed down to the Chinese, that persons with ulcers cannot look upon it without dying, is inexplicable. Linseed, *ku-ma*, or the sesamum is its antidote. The Chinese have a notion that the sight of varnish produces ulcers, and I have heard of foreigners complaining of eruptions of boils caused, as they supposed, by sleeping in newly varnished or painted rooms. Headache and poisoning in some cases are similarly attributed to paints and varnish. *Ma-pên* refers to the seeds and husks. If too much hemp be eaten, devils may be seen; in fact, it is taken by those wishing to indulge in spiritualism. Persons under its influence go about as if insane, their bodies feel very light. It is recommended as a cure for scorpion bites; it promotes the growth of hair and prevents its turning white, in fact, stops the advance of age. These foreign remedies are usually so powerful and their action so marvellous that they are seldom prescribed by the Chinese.

After curing the Tourgouth Prince of his opium habit and the diseases consequent upon it, I was earnestly solicited by him to let him have some *bang*. This is the name by which the Indian hemp is known in Central Asia among the Mohammedans, and it is apparently used quite extensively. It is supposed to have been the substance employed by the celebrated surgeon Hwato, during the dynasty of the WEI (220-230 A.D.), as an anæsthetic. It is mentioned in the *Collection of Ancient and Modern Medicine*, a book published in the beginning of the 16th century, that in acupuncture and in applying the moxa Hwato gave a preparation of hemp which in a short time produced such anæsthesia as if the patient had been either drunk or dead. During this

period of loss of sensation openings, cuts, amputations, &c., were performed without the slightest pain being felt. Stanislas JULIEN of Paris called attention to this anæsthetic in 1849, as employed in China in ancient times. TATARINOV has fallen into an error in calling *ma-yoh* or anæsthetic medicine *cannabis indica*. It is a generic term applied to medicines of this class, but to no substance in particular, and the purchaser or student will seek in vain for such a substance in the shops or in the books. Cannabis doubtless formed an ingredient in some recipes so designated.

In pertussis emetics are to be employed; vinegar is ordered, but all cold remedies are forbidden; the object of the treatment being to open the pores of the skin. The disease is caused by cold enveloping heat. In diet, thin articles are to be taken. It occurs in children at the 10th month (end of autumn and beginning of winter). In the sthenic type twenty pills of the *sze-kin tan* prescription are ordered as an emetic; in asthenic cases two or three pills are to be taken—not sufficient to cause vomiting. In Chinese books, cough is minutely described like everything else, and the following varieties are specified, viz., that arising from wind, cold, heat (internal), damp (internal), from excess of water with goose-skin; consumptive, from debility, over-eating; food produces mucus, fat pork produces cough, apoplexy is said to be caused by eating fat pork; from air, especially in summer when phlegm cannot be expectorated, a variety itself called phlegm, with expectoration but no cough, a dry form with sound but no phlegm, bloody from superfluous blood, with it there is bad breath, results from brawls and fights, the blood getting coagulated, wine or vinous cough from overdrinking, chronic, with phlegm in the air-tubes like glue, irregular and rough on account of either damp or wine; then there is fire cough, sound emitted with little phlegm and with a red face, and lastly night cough.

Next in order of importance among diseases seen during the winter six months, and first in point of mortality, is our old enemy diphtheria. Not a few cases of this affection were seen during the early winter. The type of disease seems to be very severe and the mortality very great. The patients are usually seen on the 4th or 5th day of the disease, and then there is extremely little hope. By that time there is great tumefaction of the throat, deglutition is difficult, the voice is completely altered, the tonsils, soft palate and uvula are covered with false pellicle. I have used carbolic acid, tincture of iodine and lunar caustic with which to brush or swab out the throat, and have found all very serviceable in bringing away large pieces of the false membrane. I cannot say the treatment has been very successful, at all events very few returned to give thanks. This is one of the great drawbacks attending an out-patient practice, and it is not till months or years afterwards perhaps that one hears of a former cure, when the patient turns up with some other malady. The patients or their friends never reflect that the physician keeps a record of important cases, watching the effect of the treatment and wishing to know its results; moreover, they do not know what cases interest him, and for what scientific object he minutely watches the case; or if they do reflect, it is only to think that the final object is only important to themselves and the patient, and among so many patients their non-appearance will never be noticed. It is advisable with an interesting case to note down the address of the patient on the first visit.

In the month of March, as just stated, there prevailed a good deal of sore throat and swells and swelling of the glands of the neck among both foreign and native children, and also attacking not a few adults. An alum or vinegar gargle, fomentations or inhalation of steam gave

relief. Our rather sudden changes of temperature and N.W. breezes are to be credited with this condition of things.

The next affection to which I would call attention from its infrequency is erysipelas. At some of the ports it has not been met with at all. It is so rarely seen at the mission hospitals that a single case calls for special remark in an annual Report. This is a satisfactory state of matters compared with the experience of hospitals in the West, and considering the serious danger to which erysipelas exposes a patient. Did it follow after serious amputations and capital operations only, we should be able to explain its rarity in China, but it is most frequent after the most trifling operations, at least such is my experience here. Dr. KERR, in his Report of the Canton Hospital for 1874, mentions his first case after 20 years experience. During the past year he notes four or five cases in which it occurred, but none were fatal. I operated on a patient over 50 years of age, and on a young girl about 10 years of age, for entropium, and erysipelas followed in both cases. In the first case, both eyes were operated upon, and in the latter only one; but the most serious erysipelas was set up, and I had great fear for the life of the elder patient. The skin suppurated in several places, and the head, face and ears assumed extraordinary dimensions. Following close upon the operation, and the patients being in perfect health at the time, they cannot but be struck with the connexion between the two. Both were out-patients, and so trivial is the operation considered that they were allowed to return home. The Chinese seldom blame the faculty, death is ascribed to fate, and any untoward circumstances are accounted for by having caught cold. On another case operated upon at the same time for the same disease, a similar result followed, but with comparatively mild inflammation. The only fatal case that I have met with, and probably the only other case in addition to those above noted, occurred in a lad about 17 years of age, during the winter. I operated for harelip, he returned home, erysipelas set in and afterwards diphtheria, and the patient succumbed in about 20 days after the operation. After the first few days I ceased to attend the patient, a host of quacks being called in, who wasted valuable time with their cold and hot remedies in their relation to the dual principle. When these cases broke out I ceased operating for a short time, and enjoined the utmost cleanliness on the part of the assistants. The Chinese, and the assistants not excepted, are not very particular about clean water and the use of clean sponges. I attributed the erysipelas to the latter cause. So rare indeed must be the disease in the South, that one medical man wrote to me asking about its existence here, and the name by which it is known. The name given to it here is expressive enough and refers to the size of the head produced by it, viz., *ta-t'ow wên* 大頭瘟. Another name is *li-t'ow wên*, so called when the face and head are greatly swollen, and large abscesses form, and proving very fatal when the throat is swollen. When the swelling is in front and behind the ears it is called after the frog; when the lower jaw is swollen, of which 80 or 90 per cent. die, it is then called *lu-sze*. Warm winters make it common—it is said to be epidemic, being caused by the poison of the seasons. At first it resembles fever and the patient may die in from five to seven days. It spreads on the face, nose, throat and does not suppurate. There is headache, delirium, a feeling of cold, and the throat is swollen to narrowness. The above description certainly refers to erysipelas. The variety termed *lu-sze* might be applied to diphtheria for want of a better term, the great tumefaction of the neck being taken as characteristic of it.

Among rare diseases in China may be mentioned scarlet fever; and indeed the same difficulty seems to exist in the South about a name by which to designate it. It is frequently mixed up with measles, in fact nearly all diseases of the rash and pimple varieties are generally designated by a combination of the two words *chén-tze* 疹子 and *sha-tze* 痧子. The former is the word for measles (*rubeola*) and the latter that applied correctly to scarlatina.

Typhus fever seemed to have prevailed pretty extensively during February and March, although hardly anything of it was seen at the dispensary. At one of the mission stations in this city, however, it broke out, attacking five individuals, of whom two died, one with head and the other with chest complications. The disease had been carried by a country convert, who came up to the city for instruction during his convalescence. Although there were a good many foreigners going in and out about the compound none were attacked.

Ague is dying out here, and, if we have a comparatively dry season or two, we hope to revert to our normal condition of being an unagueish district. The numbers attacked this winter, judging from those who have applied for relief, and this is a very fair criterion, compared with last, have been very small. In October only 10 per cent., November 3 per cent., and December 3 per cent., compared with the corresponding months of 1873, which were 20, 20, and 6 per cent. respectively, applied for relief. In January, February and March of 1875, compared with 1874, and still more as compared with 1871, 1872 and 1873, the reduction is as striking. Evidences are not wanting, however, to show that we shall still have a considerable number of ague patients during the forthcoming summer and autumn. The malarial poison when once introduced into the system is not so easily driven out.

*Syphilis*.—The book term for this affection is *tien-pao chwang* (天疱瘡) or *yang-mei* (楊梅), the latter term being derived from the resemblance of the disease to the wild strawberry (*myrica*). This affection is classed with *lai* (leprosy). The symptoms enumerated are swelling, redness, moisture, ulceration, itching, pain; it is compared to the projecting nails of the ancient bells, or to yellow beans, to cotton wool, purple grapes and also to the air bladder of fishes, soft, with clear fluid under it. It is this latter sort that is called *tien-pao chwang*. Each of these resemblances is made, of course, to tally with the Chinese viscera, and these again in their relation to the five elements, five colours, five tastes, &c. However the disease may be described, it is remarkable that the treatment for the last 2,000 years should correspond so exactly with our modern western therapeutics. Calomel, cinnabar, realgar are among the recognised formulæ, the first-mentioned substance entering into every recipe. Prescriptions are given also to drive out the poison of the calomel after it has effected a cure, and here is used the *t'u-fu-ling* or chinaroot (*rad. smilacis*), a drug belonging to the sarsaparilla class, a remedy extensively used in Europe during the last century in syphilitic cases, the knowledge of its efficacy in this department having been derived from China. The Chinese, popularly at least, believe salivation to be the poison of syphilis flowing out. *Smilax* is prescribed along with *chw'an-tsiao* or *hwa-tsiao* (川椒, 花椒), the theory of the treatment consisting in the belief that the calomel in the system combines with the *tsiao* and passes off by the bowels. Here I would remark what has been brought to my attention by confirmed opium smokers, who have sometimes not more than one stool a week, that this *tsiao*, combined with black sugar, is aperient, and will bring about an easy and gentle catharsis in opium cases when everything else fails. Not only are preparations of mercury used, but some of the

most approved modern methods have been in vogue, at least detailed in their books, from time immemorial. For example, fumigations and vapour mercurial baths, both local and general, and such like, are found among their remedies. As a very effective fuming prescription take the following:—Lead and mercury, *āā* 1 mace; cinnabar, *ju-hiang* (olibanum), myrrh, *āā* 5 candareens; dragon's blood, realgar, *ch'ên-hiang* (沉香 wood of *aquilaria agallocha*), lign aloes *āā* 3 cand.; to be pulverised, wrapped up in paper to form a wick and put into a lamp. The patient is to be covered over, and while undergoing this vapour bath successive mouthfuls of cold water are to be taken, and frequently renewed as it becomes warm. The inhalation is to be through the nose, and the object of the cold water is to preserve the teeth from the influence of the mercurial poison. This treatment is to be followed three times on the first day, and once daily afterwards. Another prescription is lead (carbonate) and fuligo, *āā* 1 mace; black lead (*hei-yüen* 黑鉛), 8 cand., to be fused with mercury 1 mace, and formed into cakes, to which is added *yin-chu* or spurious cinnabar (硃砂) and calomel, *āā* 1½ mace; alum and realgar, *āā* 1 mace, to be made into a mass with jujubes and afterwards divided into 6 pills; one pill to be put into a small charcoal furnace or stove and the patient to blow it with the head covered. After using this remedy for 4 or 5 days, salivation sets in, and so the poison, strange to say, is supposed by this means to be driven out of the system. This is termed the “blowing or puffing prescription.” Another is called the “contemplating remedy.” In this the patient is put into a barrel and smoked in the same way. To remove syphilitic blotches, alum and rhubarb in equal parts are mixed with water; with this the affected portion is to be rubbed, and the stain disappears. In the treatment of the syphilides the same course is pursued, the notion being that secondary and tertiary symptoms are not so much a further development of the disease as of the calomel, or at all events, the disease having been cured by the use of mercury, there ensue other diseases, or bad ulcers of the palms of the hands, called goose-palm (*psoriasis palmaris*), one layer after another exfoliating but never ceasing. This affection is called *o-ch'ang-fêng*. As an internal remedy they recommend the following prescription:—

R Ya-tsao-tsiao, .....	牙皂	legumes of <i>gleditschia chinensis</i> .
T'u-fu-ling, .....	<i>āā</i> 2 mace.	
Liquorice, .....		
Ts'ang-erk-tze, .....	蒼耳子	fruct. <i>Xanthii strumarii</i> .
Kin-yin-bwa, .....		
Tsao-tsiao-tze, .....	<i>āā</i> 1 mace.	
Fang-fêng, .....	防風	rad. <i>Libanotidis</i> .
King-kieh, .....		
Lien-k'iao, .....	連翹	
T'ien-ma, .....	天麻	
Ts'ien-hu, .....	<i>āā</i> 5 cand.	前胡.
Shêh-chw'ang-tze, .....	蛇床子	sem. <i>Cnidii</i> .
Chw'an-tsiao, .....	a little.	To be boiled.

As an application to the hands, to be rubbed on and heated over a fire, the following is the recipe:—Milk, fir oil, sesamum oil, yellow wax, *āā* 1 tael; add *hu-fên* (胡粉 or 鉛粉) 2 mace, calomel 1½ mace, musk 5 cand., and mix the whole.



Syphilis is not by any means a rare affection here. I have each year to operate for phimosis in a number of cases. I have been astonished at the frequency of this affection among the Chinese, the better classes not excepted, of whom quite a large number has been seen. This is doubtless owing to the inability of the native doctors to cure it, and the disease when left to itself most frequently results in phimosis. Their filthy habits generally, and their abstinence from water and baths, especially when unwell in any way, aggravate this as they do other diseases. A respectable southerner once appeared with great induration of the glans penis. He had been cured of gonorrhœa and chancre some months previously. On this occasion large masses of hard sebum were scooped out from under the prepuce, after which the organ assumed its natural dimensions. It is hardly credible that there could have been, in so short a space, such a thick layer of secretion. The Mongols seem to have a worse type of the disease than the Chinese, and to be less amenable to treatment. This may be owing to still greater filth and to their meat diet. In many of the cases seen by me, the acute disease has been cured or has got well of itself, leaving a condition of parts inimical to sexual intercourse and micturition. The hope of having sons after an operation has influenced some to submit to circumcision. Thirty or more years afterwards, neglected cases have turned up with cancer of the penis, and to amputation it is difficult to get the Chinese to assent, out of fear of disobedience to parents who gave them their body intact, and for fear of appearing in the next world minus a member. As a rule, they are ignorant of the nature of cancer and class it among ordinary ulcers, and of course expect it to heal under plasters. I have operated upon several cases said to be congenital, but evil practices in youth are frequently at the root of the mischief. On one man, an opium smoker, I operated, and a month afterwards he returned quite cured but with the orifice closed, which had to be opened. I was consulted by a wealthy and well-known citizen at Tientsin, 84 years of age, for epithelial cancer of the organ. The root was free for about an inch, and the old man was hale and hearty, but the family still trusted to black plasters and washes effecting a cure, and so no operation was performed. The family feared that an operation of this sort would blast a whole life's reputation for benevolence. In the case of a wealthy and influential Mongol, I found scrotum and penis adherent to the abdomen, resembling the cicatrix of a large burn in that region. The penis was lost sight of in the scrotum. It was proposed to cut down and liberate the organs. Bubo is very frequent.

The book term for affections of the genito-urinary organs generally is *shan* (疝), and refers usually to disease of the testes. There are seven species of this disease, according as they are caused by or contain cold, water, air, blood, tendon, fox and t'ui (癰 large and bright hydrocele?). The classifications of various writers do not agree; it is the custom with all subsequent writers to put down whatever every other has written, and in addition, to give reason for writing a book at all, to adduce their own views. In this way the most heterogeneous conglomeration of views is obtained, no one having the knowledge requisite to sift the truth and reject the false, and to point out the errors of previous writers. One advantage arises from this mode of dealing with the subject, that one single work on any branch is so encyclopædic, that one book suffices to give the views of all. It has the disadvantage of increasing their literature and the number of volumes in a book to absurd dimensions. *Shan* is used in a generic sense, to denote all scrotal diseases. In the *nei-king* it means disease in the small bowels, by which defecation and

micturition are rendered almost impossible. It is synonymous with *pén-tien*, the scampering little pig, intestinal air, bladder air, and the various kinds are all included in the one expression, air of the kidneys. Although there are seven sorts, the *cold* shan is the generic form, the *water* shan belongs to the class called *tui*, *air* shan belongs to the class *fox*, the *blood* shan to the class of ulcers and abscesses, and *kin*, not frequently met with, to the class of ulcers of the prepuce. The seven species of shan are therefore designated as above. In the centre of the *tui*-shan there is a thing hard like wood and which causes a dragging sensation. The four sorts of this shan are: intestinal, testicular, air and water. Another division gives the following seven sorts:—*küeh*, *kia*, *cold*, *air*, *plate*, *supplementing* and *wolf*. In the cold form, the scrotum or testicle is like a stone, in the water kind it is swollen, painful and perspires, in the tendon (*kin*) class the penis is greatly swollen, the urethra itches, there are ulcers and suppuration, in the blood shan there are two things like cucumbers, one on each side in the groin, popularly called *pien-yung*, penile abscess (*bubo*). In the air shan it appears as if attached to the kidneys above and to the scrotum below, and the popular name is *pien-chui*. Children have it frequently, in which case it is to be punctured, or medicines given to dismiss the air. It is frequently congenital—the moxa may be used. The fox shan, resembling an upturned tile, is so termed from its retiring into the abdomen at night and coming out during the day, as soon as the individual stands up, like a fox going into or coming out of his den. The *tui*-shan is a species of greatly enlarged scrotum, without itching and pain, more common among the people of the south where it is moist and hot. The name is also applied to any tumour in the vulva and congenital hernia, of which there are four sorts as already stated.

*Peking in relation to Life Assurance. Additional Note.*—In referring under this subject in the last Reports (pp. 30-37) to those northern ports known to me with which Peking was compared, I stated my opinions formed of these places as far back as 1863, coupled with the published and well-known views of medical men regarding Shanghai, my own acquaintance being far too limited to permit of generalisations respecting it. At the settlements of the three northern ports, although there is nearly perfection in houses, ventilation, drainage, roads, water supply, &c., &c., still their contiguity to the native towns—a fact which cannot be gainsaid, except in the case, perhaps, of Tientsin—must always present in the case of epidemics a grave source of danger, in which particular they do not differ very widely from Peking, even if in some respects they compare favourably with it. Since writing the former paper on this subject I have visited Tientsin and Chefoo, and regarding the former, my opinion is not one whit too severe, the condition of the native city and especially the moat, and the low flat plain behind the settlement, covered with graves, water, and pools, from which earth is being taken to raise other ground, or with which to make sun-dried bricks, being dangerous to health. I assert once more that all the stinks of Peking put together would not compare with that arising from a limited portion of the Tientsin city moat. This condition is all the less excusable, as the population possesses a noble river into which the moat could be easily drained. But in regard to Chefoo, I beg to modify the view advanced. During the last 12 years a small foreign quarter has sprung up, which, to a very large extent—it has the sea on three sides—is isolated from the native town, and which is everything that could be desired. The native town, although practically joined on to it, is still separate and distinct; and business, native shipping, &c., bring comparatively few towards the foreign Yentai.

I am informed by one of the medical men of the port, that the residents, anxious to avail themselves of the very fine beach on the other side, cross the bay in boats, thus avoiding the filth of the native town. A very great change has indeed been effected in this port since I resided in it for a short time twelve years ago, and I wish here to bear testimony to its generally healthy character, to its fine situation, and unusual facilities for boating, bathing and exercise of all sorts. Admitting all this, I do not invalidate, however, my argument in favour of classifying Peking in the northern division, where it is geographically. All the native cities or towns are capable of great improvement, and Chefoo is no exception; but it is admitted on all hands by those who have visited it, that the capital is among Chinese towns *sui generis*. The foreign quarter of Newchwang, I am happy to learn, is also improving, and new and better houses are in course of erection. My impression of the native town, visited in 1868, was more favourable than that formed of Chefoo. In speaking of these places, the native towns are to be understood, unless otherwise expressly stated, and not the foreign concessions or Settlements.

*E.—Dr. J. R. SOMERVILLE's Report on the Health of Foochow (Pagoda Anchorage),  
for the half year ended 31st March 1875.*

*I.—METEOROLOGY.*

I am indebted, as before, to the Harbour Master, Captain BISBEE, for the following abstract of Meteorological observations for the six months. These, along with the table published in my Report for the preceding six months, complete one year of full and accurate observations, viz., from 1st April 1874 to 31st March 1875.

I purpose now to give a brief résumé of the climate for the six months under consideration, and by reference to the record in last Report to make the remarks embrace the meteorology of one year.

*Analysis of the Meteorological Table.*

(a.) *Barometer.*—The abstract shows the increase of pressure as the N.E. monsoon establishes itself. The maximum is reached towards the end of December and beginning of January. A slight diminution is noticed in February, and a marked one in March; in the latter month the winds are usually variable.

The highest reading of the barometer, 30.460 inches, was made on the morning of the 31st December 1874. Remark—"Fine dry clear weather; fresh breeze. Latter part moderate and gloomy;" and the lowest reading, 29.646 inches, on the afternoon of the 1st October. Remark—"Frequent showers of rain, dense haze and overcast throughout." The range for the six months is therefore .814, and by comparing the present with the preceding six months the range for the year is found to be 1.022.

The abstract shows the monthly means. The mean for the six months is found to be as follows:—At 9.30 A.M., 30.189; at 3.30 P.M., 30.084; and the mean for the year, at 9.30 A.M., 30.016; at 3.30 P.M., 29.930.

(b.) *Thermometers.*—From a comparison of the maxima and minima daily means, the mean temperature of the several months is found to be as follows:—

1874.	1875.
October, ..... 73.9°	January, ..... 49.2°
November, ..... 61.7°	February, ..... 52.1°
December, ..... 59.1°	March, ..... 61.6°

The mean temperature for the six months in the shade is therefore 59.6°, and as the previous six months showed 78.1°, the mean temperature for the year is 68.8°.

It is curious to note that 68.8° is the exact temperature of the isothermal line that cuts this district, according to the projection of DOVE. For this part of the world at least, I presume that DOVE must have fixed the mean annual temperature on theoretical grounds entirely, for it

does not seem possible that he could have had reliable meteorological records of Foochow so long ago as 1853, when his projection was published. Indeed, so far as I know, the present observations for one year are the only ones from this neighbourhood that meet the requirements of scientific accuracy. Several years' observations will be necessary to establish the true mean annual temperature of Foochow, but the fact that the result of one year's records coincides with DOVE's estimate elaborated from theoretical considerations is a very remarkable one, and it shows with what care and ability the researches of this great living meteorologist are conducted.

The highest temperature in the shade is recorded on the afternoon of the 3rd October,  $91.2^{\circ}$ . Remark—"Fine pleasant weather throughout; cirro-cumulus;" and the lowest in the shade,  $38.1^{\circ}$ , on the morning of the 16th January. Remark—"Overcast and raining; hazy; snow on hills; cirro-cumulus; unpleasant." The range in the shade for the six months is thus  $56.1^{\circ}$ ; for the year it is  $62.5^{\circ}$ .

The highest temperature in the sun,  $155.2^{\circ}$ , was reached on the afternoon of the 3rd October (see remark in last paragraph), and the lowest,  $51.4^{\circ}$ , on the 13th January. Remark—"Light drizzling rain; overcast; cumulus in heavy masses." The range in the sun for the six months is  $103.8^{\circ}$ , and for the year,  $114.8^{\circ}$ .

By comparing the maxima and minima means, we find the mean difference of the day and night temperatures to be as follows:—

1874.	1875.
October, ..... $12.3^{\circ}$	January, ..... $9.7^{\circ}$
November, ..... $15.7^{\circ}$	February, ..... $10.8^{\circ}$
December, ..... $13.8^{\circ}$	March, ..... $14.6^{\circ}$
Mean difference for the six months, ... $12.8^{\circ}$	
" " " year, ..... $13.5^{\circ}$	

(c) *Hygrometer*.—*Dew point, elastic force of vapour, humidity*.—The mean difference between the dry and wet bulbs for the several months is found to be as follows:—

—	At 9.30 A.M.	At 3.30 P.M.	MEANS.
1874.			
October,.....	$4.3^{\circ}$	$4.9^{\circ}$	$4.3^{\circ}$
November,.....	$5.2^{\circ}$	$5.6^{\circ}$	$5.4^{\circ}$
December,.....	$3.3^{\circ}$	$5.3^{\circ}$	$4.3^{\circ}$
1875.			
January, .....	$3.2^{\circ}$	$4.3^{\circ}$	$3.7^{\circ}$
February, .....	$2.9^{\circ}$	$4.6^{\circ}$	$3.7^{\circ}$
March, .....	$3.2^{\circ}$	$10.3^{\circ}$	$6.7^{\circ}$

Mean for the six months, .....  $4.6^{\circ}$

" " year, .....  $5.4^{\circ}$

The greatest difference between the bulbs occurred on the afternoon of the 17th November. Dry,  $69.9^{\circ}$ ; wet,  $55.3^{\circ}$ ; difference,  $14.6^{\circ}$ . Remark—"Fine throughout; light haze in morning, low down; middle and latter parts clear; cumulus and stratus;" and the least difference on the

morning of the 5th October. Dry bulb, 75.1°; wet bulb, 74.9°; difference, .2°. Remark—"Morning, a light squall from N.E., with rain; drizzling rain throughout rest of day."

The range for the six months, ..... is 14.6°

" " " year, ..... " 17.3°

The *Elastic force of vapour* reached the maximum 1.060 on the afternoon of the 4th October.

Remark—"Morning fine and pleasant; middle part sultry; pleasant evening; cirrus and cumulus." It fell to the minimum, .169, on the morning of the 26th January. Remark—"Fine pleasant morning and clear; cirrus, cumulus and stratus."

*Humidity*.—The abstract shows the means for the several months. It will be observed that the humidity is very small in November, December and January, that is, during the months when the strength of the N.E. monsoon is greatest. The abstract also shows a considerable decrease in the afternoon as compared with the morning reading.

November shows the least degree of moisture, and this month is usually regarded as the finest of the year.

(d) *Rain*.—Rain fell on—

1874, 7 days in October.	Amount,.....	3.475 inches.
" 2 " " November.	" .....	.075 "
" 5 " " December.	" .....	.780 "
1875, 10 " " January.	" .....	2.000 "
" 9 " " February.	" .....	1.092 "
" 10 " " March.	" .....	2.540 "
43 days.	Total,.....	9.962 inches.

For the sake of comparison I add the rain-fall for the previous half year as shown in last Report:—

1874, 10 days in April.	Amount,.....	1.881 inches.
" 20 " " May.	" .....	7.605 "
" 8 " " June.	" .....	3.401 "
" 7 " " July.	" .....	7.575 "
" 12 " " August.	" .....	3.655 "
" 15 " " September.	" .....	3.510 "
72 days.	Total,.....	27.627 inches.

We have thus 72 days of rain and the amount of 27.627 inches in the summer months, against 43 days and 9.962 inches in the winter months. Total fall for the year, 37.589 inches.

The greatest amount of rain in the six months fell on the 1st October, 2.310 inches. November and December were as usual very dry months, January and February dry, and March had about the ordinary amount of rain for that month.

(e) *Wind*.—The abstract shows the velocity, proportionate force, and the number of days in each month on which a particular wind prevailed.

The N.E. monsoon blows over the whole period of the six months. It was later than usual in setting in this season, and consequently the warm weather remained with us longer. This wind is possessed of eminent tonic properties, being cold, dry and bracing, and it is to it that we are indebted for the delightful climate of the six winter months.

## Abstract of Meteorological Observations taken at the Harbour Master's Office,

Latitude 25° 58' 22" North. Longitude

DATE.	BAROMETER, No. 272.		THERMOMETER.				HYGROMETER.					
	Corrected for Index error, Capillary attraction and to temperature of 32°		Dry bulb, corrected reading for Index error, No. 172.		Wet bulb, corrected reading for Index error, No. 173.		Temperature of dew point, computed.		Elastic force of vapour, in inches of Mercury.		Humidity 0-1.	
	Taken at 9.30 A.M.	3.30 P.M.	9.30 A.M.	3.30 P.M.	9.30 A.M.	3.30 P.M.	9.30 A.M.	3.30 P.M.	9.30 A.M.	3.30 P.M.	9.30 A.M.	3.30 P.M.
1874.	inches.	inches.	°	°	°	°	°	°				
October, .....	Max. 30'418	30'335	82'8	90'7	79'1	82'8	75'9	81'1	'953	1'060	'990	'988
	Mean 30'059	29'985	72'9	76'5	69'1	71'6	67'1	69'2	'685	'737	'826	'789
	Min. 29'652	29'646	58'6	63'8	50'1	55'0	41'8	46'9	'265	'322	'535	'525
November, .....	Max. 30'416	30'375	68'8	81'4	67'0	72'2	66'1	68'1	'641	'688	'964	'918
	Mean 30'264	30'164	59'7	63'7	54'5	58'1	50'3	51'4	'375	'392	'721	'583
	Min. 30'019	29'891	46'9	48'1	43'0	44'3	37'4	39'2	'223	'240	'460	'374
December, .....	Max. 30'460	30'379	67'7	75'7	63'2	68'9	61'6	66'0	'547	'639	'985	'937
	Mean 30'231	30'453	56'9	62'8	53'6	57'9	50'8	53'5	'379	'421	'805	'724
	Min. 29'958	29'892	45'0	48'8	41'8	44'8	37'9	40'4	'228	'251	'645	'449
1875.												
January, .....	Max. 30'457	30'328	56'2	68'9	54'1	61'2	53'7	56'3	'414	'454	'969	'928
	Mean 30'261	30'171	48'5	52'7	45'3	48'4	41'7	43'9	'272	'294	'778	'732
	Min. 29'985	29'900	37'8	41'4	37'1	38'1	30'6	33'6	'169	'192	'497	'493
February, .....	Max. 30'205	30'296	57'5	69'1	56'0	61'0	54'9	56'5	'432	'457	'968	'958
	Mean 30'215	30'121	50'8	55'1	47'9	50'5	45'2	46'2	'305	'319	'814	'734
	Min. 29'823	29'976	45'2	47'6	41'2	43'8	36'2	38'6	'214	'227	'627	'539
March, .....	Max. 30'331	30'248	72'7	79'6	67'9	70'0	65'5	68'6	'629	'701	'968	'942
	Mean 30'109	30'015	59'3	66'3	56'1	56'0	53'7	56'1	'423	'468	'817	'707
	Min. 29'801	29'798	48'8	50'7	43'6	51'6	36'5	36'0	'217	'212	'598	'514

NOTE.—Dew point, Elastic force of Vapour and Humidity computed from Dr. Arson's Formula.

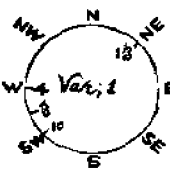
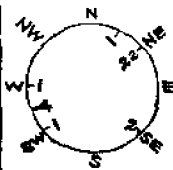
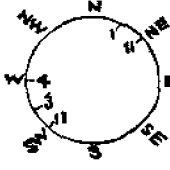
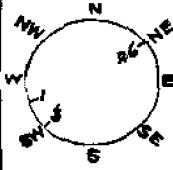
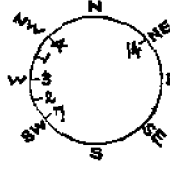
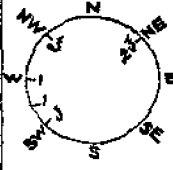
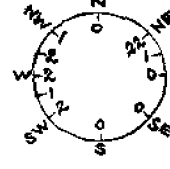
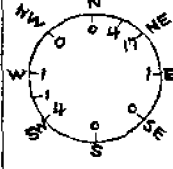
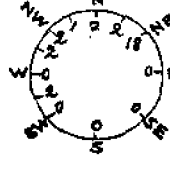
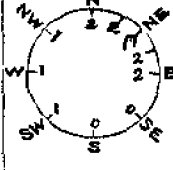
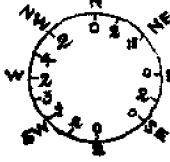
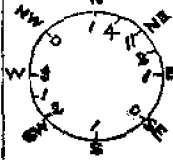
1874-75.]

FOOCHOW.

49

Pagoda Anchorage, Foochow, for the six months ended 31st March 1875.

119° 27' 40" East. Height above the sea 30 feet.

SELF-REGISTERING THERMOMETERS.				Rain 24 hours.	WIND.				CLOUDS.		
Solar Radiation Thermometer No. 77072.	Maximum in Air.	Minimum in Air.	Velocity in miles per hour.		Force in lbs. per square foot.	Velocity in miles per hour.	Force in lbs. per square foot.	Summary of direction.	0-10		
9-30 A.M.	9-30 A.M.	9-30 A.M.	Inches.	9-30 A.M.	9-30 A.M.	3-30 P.M.	3-30 P.M.	9-30 A.M.	3-30 P.M.	9-30 A.M.	3-30 P.M.
0	0	0									
155'2	91'2	75'0	2'310	17'36	1'541	17'50	1'531			3 at 10 7 at 9 4 at 8 2 at 7 4 at 6 1 at 5 3 at 4 4 at 3 2 at 2 1 at 1	3 at 10 4 at 9 3 at 8 2 at 7 6 at 6 2 at 5 1 at 4 3 at 3 2 at 2 2 at 1
127'3	80'1	67'8	121	8'68	432	10'61	603				
80'8	70'3	55'0	000	4'50	094	5'00	125				
142'5	85'9	62'0	052	15'22	1'158	26'83	3'599			0 at 0 1 at 13 2 at 0 3 at 5 4 at 2 5 at 2 6 at 1 7 at 0 8 at 0 9 at 4 10 at 1	0 at 0 1 at 20 2 at 0 3 at 3 4 at 1 5 at 0 6 at 0 7 at 0 8 at 1 9 at 4 10 at 1
120'8	69'6	53'9	025	8'13	406	10'22	731				
69'0	48'9	41'2	000	2'22	027	2'00	020				
133'0	78'8	61'8	260	14'39	1'035	18'67	1'743			0 at 0 1 at 4 2 at 5 3 at 0 4 at 4 5 at 2 6 at 6 7 at 1 8 at 0 9 at 7 10 at 2	0 at 1 1 at 6 2 at 2 3 at 2 4 at 2 5 at 4 6 at 4 7 at 3 8 at 3 9 at 3 10 at 3
109'3	66'0	52'2	025	7'44	351	8'50	452				
60'8	54'0	42'2	000	3'06	047	2'67	042				
130'0	73'0	54'2	862	14'00	980	25'83	3,336			0 at 0 1 at 1 2 at 2 3 at 3 4 at 4 5 at 5 6 at 6 7 at 7 8 at 8 9 at 9 10 at 10	0 at 0 1 at 1 2 at 2 3 at 3 4 at 4 5 at 5 6 at 6 7 at 7 8 at 8 9 at 9 10 at 10
88'1	54'1	44'4	064	8'24	386	9'31	557				
51'4	44'6	35'1	000	3'56	057	2'50	024				
126'0	73'0	52'0	390	18'22	1'655	13'83	956			0 at 0 1 at 1 2 at 2 3 at 3 4 at 4 5 at 5 6 at 6 7 at 7 8 at 8 9 at 9 10 at 10	0 at 0 1 at 1 2 at 2 3 at 3 4 at 4 5 at 5 6 at 6 7 at 7 8 at 8 9 at 9 10 at 10
91'2	57'5	46'7	039	8'10	4'000	7'69	340				
59'0	49'0	41'0	000	2'83	040	2'50	031				
148'5	84'2	62'2	735	12'22	799	17'17	1'474			0 at 0 1 at 1 2 at 2 3 at 3 4 at 4 5 at 5 6 at 6 7 at 7 8 at 8 9 at 9 10 at 10	0 at 0 1 at 1 2 at 2 3 at 3 4 at 4 5 at 5 6 at 6 7 at 7 8 at 8 9 at 9 10 at 10
117'2	68'9	54'3	082	7'01	284	8'49	444				
67'0	54'8	42'2	030	3'06	042	2'50	027				

Rain Gauge above ground 4 feet 9 inches.



## II. SUMMARY AND GENERAL REMARKS.

It will be seen that the characteristics of the winter are just the reverse of those of the summer months, viz., a moderate temperature, a low degree of humidity, and a small rainfall.

The N.E. monsoon set in about the beginning of October, (I notice in my private diary the remark, "8th October, *Kwangtung* reports fine monsoon outside,") and it brought with it, as usual, cool, bright weather. November is perhaps the finest month of the year—cool, breezy and bright. January is sometimes very cold, especially when the wind happens to be from the north-west. There was snow on the hills once this season, and we had a little ice in the early morning now and again.

It is impossible to describe the feeling of exhilaration experienced on the advent of the N.E. monsoon. The languor and irritability of summer disappear, and are succeeded by a sense of buoyancy and cheerfulness that soon makes one forget the discomforts of the hot months.

Though thus grateful to the healthy, I have observed that September and October are trying to the sick, and that serious cases occurring during the last months of summer and passing into September and October are apt to do badly. Chronic dysentery especially, contracted in summer, puts on a bad form in September and October, and one feels more anxious about cases of paroxysmal fevers, especially those of a remittent type, in these months than during any portion of the year. I do not know how to account for this, unless it is that the change from heat and moisture to a dry, cool, bracing air proves too much for such patients, debilitated as they are. We have, moreover, sudden changes of temperature at this season after a burst from the N.E. There was one fall of 20 degrees within a few hours this autumn, and 10 and 12 degrees are not at all uncommon.

There is little else to be said about the climate of the winter six months except, shortly, that a finer could scarcely be desired. It is this long, cold, bracing winter, during which hard exercise can be taken, that gives us the great advantage over our countrymen and countrywomen in India. The difference of the two climates is noticeable in a marked degree in the appearance of the children. Healthy children are easily reared here. It is true that they grow pale and often fretful in the hot weather, but when the winter monsoon sets in they soon recover their rosy cheeks and laughing eyes, and show, by the ceaseless activity of their movements, how intensely they are enjoying their young lives. The same general remark applies, *mutatis mutandis*, to ladies.

## III. DISEASES.

Under this head there is fortunately little to note. There were no deaths either afloat or on shore during the six months, and the cases of illness were few and of no interest in a medical point of view.